

## North Long Beach Street Enhancement Master Plan



August 12, 2002



*Prepared for:*

**City of Long Beach  
Redevelopment Agency**



*and*

**City of Long Beach  
Department of Public Works**

*Prepared by:*

**Willdan**  
*Infrastructure Improvements*

**Patricia Smith, ASLA, AICP**  
*Streetscape Improvements*



**North Long Beach  
Street Enhancement  
Master Plan**

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## I. INTRODUCTION

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### A. The Street Enhancement Master Plan

The North Long Beach Street Enhancement Master Plan (Street Enhancement Master Plan) is intended to serve as a guide for the City of Long Beach Redevelopment Agency and Public Works Department to follow in making improvements within the public rights-of-way in the North Long Beach Redevelopment Project Area. The Street Enhancement Master Plan has been prepared in coordination with and to complement the North Long Beach Strategic Guide for Redevelopment (Strategic Guide).

The Street Enhancement Master Plan addresses 1) infrastructure improvements, such as pavement reconstruction and restructuring, concrete reconstruction, and storm drain improvements, and 2) streetscape improvements, such as street trees, medians, traffic calming and pedestrian amenities.

The master plans for infrastructure and streetscape improvements were developed in different ways: technical considerations drove the master planning process for the basic infrastructure improvements, while input from community members played a greater role in the formulation of the streetscape improvement master plan.

### B. The North Long Beach Redevelopment Project Area

The North Long Beach Redevelopment Project Area is one of seven Redevelopment Project Areas in the City of Long Beach. The Street Enhancement Master Plan addresses the portions of the North Long Beach Redevelopment Project Area shown on the map in Figure I-1, that is:

- ☐ The area bounded on the west, north and east by the City of Long Beach municipal boundaries and on the south by the Union Pacific railroad corridor, running northeasterly from the Los Angeles River to the intersection of Cherry Avenue and East 53rd Street.
- ☐ Long Beach Boulevard and Atlantic Avenue in the Bixby Knolls area. Other portions of the City are part of the North Long Beach Redevelopment Project area; however, they are not included in the scope of this Street Enhancement Master Plan.

This Master Plan refers to these areas as North Long Beach.

### C. Infrastructure Improvement Master Planning Process

The goal of the master planning process for infrastructure improvements was to establish a "road map" for maintaining the infrastructure in North Long Beach based on physical need and funding availability. The planning process for infrastructure improvements included the following key steps:

1. Develop an inventory of the street system by segment.
2. Survey the condition of existing infrastructure components located in the street and document the need for improvements to those components for each street segment. Infrastructure components addressed include: 1) roadway pavement; 2) alley pavement; 3) concrete curbs, gutters and sidewalks; 4) ADA ramps at crosswalks; and 5) the storm drainage system.
3. Determine the need for improvements to each of these infrastructure components.
4. Prioritize the needed improvements in each component.
5. Identify improvements that should be made using Redevelopment Area financing in the next 3 years.

The master plan for each infrastructure component is described in greater detail in Section III.

### D. Streetscape Improvement Master Planning Process

The primary objectives of the master planning process for streetscape improvements were to:

- ☐ Make North Long Beach more attractive and livable.
- ☐ Enhance the identity of North Long Beach as:
  1. A gateway to Long Beach;
  2. A community with a unique streetscape character; and
  3. A collection of neighborhoods where each major street reflects the neighborhoods it serves.
- ☐ Complement the Strategic Guide by providing public improvements that will attract businesses and development to North Long Beach and serve those businesses and new development.

Other important objectives include:

- ☐ Sustainability – improvements must be maintainable with a maintenance program in place prior to construction.
- ☐ Environmental responsibility – minimize run-off and water use.

The Street Enhancement Master Plan addresses streetscape improvements along 10 major streets in North Long Beach:

#### North-South Streets:

Long Beach Boulevard  
Atlantic Avenue  
Orange Avenue  
Cherry Avenue  
Paramount Boulevard  
Downey Avenue

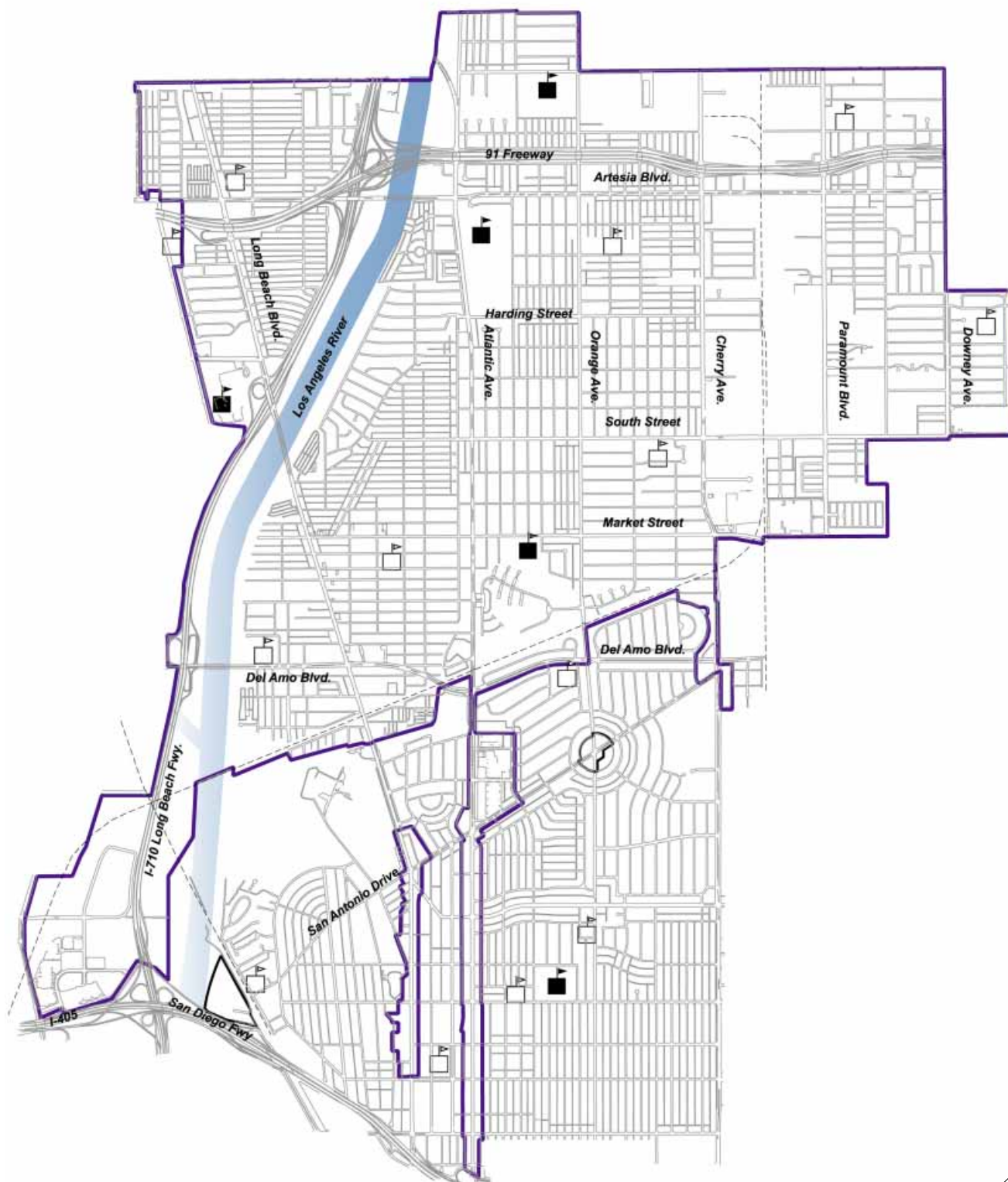
#### East-West Streets:

Artesia Boulevard  
South Street  
Market Street  
Del Amo Boulevard.





**Figure I-1. North Long Beach Street Enhancement Master Plan Area**



1" = 3,200'



These streets carry the majority of traffic and are home to most North Long Beach businesses, as well as a large number of residents, schools and other community facilities. They are the public spaces in which the day-to-day social life in North Long Beach occurs and the primary traffic corridors along which the majority of traffic passes. In addition, the north-south streets serve as gateways to the City of Long Beach from the north.

Streetscape improvements are intended to make these streets viable centers of community activity and attractive gateways to and routes through North Long Beach.

Recommended streetscape improvements are described in detail in Sections IV, V, and VI.

### Relationship to Strategic Guide for Redevelopment

The Street Enhancement Master Plan was designed in coordination with the North Long Beach Strategic Guide for Redevelopment (Strategic Guide). Joint meetings with the North Long Beach Steering Committee and joint community workshops were conducted throughout the planning process.

The Strategic Guide's land use/economic development strategies focus on the major corridors, as does the Streetscape Master Plan. The Streetscape Master Plan reinforces the Strategic Guide's objectives to:

- ❑ Create commercial nodes along corridors, including several pedestrian-oriented "villages."
- ❑ Encourage mixed use and housing along corridors to replace vacant and under-utilized strip commercial development.



- ❑ Provide community facilities along corridors in conjunction with commercial nodes and new housing.

The Street Enhancement Master Plan gives priority to streetscape improvements in targeted development areas identified in the Strategic Guide. For example, the Street Enhancement Master Plan recommends traffic calming and pedestrian amenities in pedestrian-oriented villages and residential areas. It also recommends improvements to the appearance of the entire North Long Beach area.

### Community Design Process

The Long Beach Redevelopment Agency and Department of Public Works recognized from the outset that community involvement in the design of street enhancement improvements, in particular, streetscape improvements, for North Long Beach would be critical to the implementation and effectiveness of those improvements. The community design process for street enhancement improvements was coordinated with the public involvement process for the Strategic Guide and shared its objectives of (1) coordinating an effective outreach program to attract participation, (2) eliciting input and facilitating consensus-building with respect to design recommendations; and (3) encouraging and fostering community commitment to on-going participation in the implementation of the Street Enhancement Master Plan, in conjunction with the Strategic Guide.

The primary vehicle for achieving these goals was the Strategic Guide Steering Committee, made up of representatives from the community and other stakeholder groups in North Long Beach. Members of the Strategic Guide Steering Committee acted as conduits for information to and from their constituencies. A total of 12 meetings were held with the Strategic Guide Steering Committee. The committee was composed of representatives from the following organizations:

- ❑ North Long Beach Project Area Committee
- ❑ North Long Beach Business Association
- ❑ North Long Beach Neighborhood Association
- ❑ North Long Beach Community Action Group
- ❑ Bixby Knolls Business Improvement Association
- ❑ Long Beach Housing Development Company
- ❑ Long Beach Planning Commission
- ❑ Long Beach Unified School District
- ❑ Apartment Association of Southern California Cities
- ❑ Long Beach Commercial Real Estate Council
- ❑ Gateway Cities Partnership
- ❑ Second Samoan Congregational Church
- ❑ 8th District City Council Office
- ❑ 9th District City Council Office
- ❑ Long Beach Redevelopment Agency Board

- ❑ Long Beach Police Department Staff
- ❑ City of Long Beach Planning Staff
- ❑ City of Long Beach Public Works Staff.

In addition to the input received from the North Long Beach Steering Committee, input was obtained through two open-house public workshops held in the North Long Beach Community. The first workshop was held at Ramona Park in August, 2000 and the second at Houghton Park in February, 2001.

At North Long Beach Steering Committee meetings and at the first community workshops, community members identified streetscape improvements they would like to see to make North Long Beach more attractive, more livable and give it a stronger identity. At subsequent Strategic Guide Steering Committee meetings and at the second community workshop, community members identified their priorities for both improvements and streets. Finally, the Steering Committee identified a funding split - between basic street improvements and streetscape - they would like to see: 60:40. This community design input provides the basis for the streetscape master plan.

A summary of specific comments received at the community workshops is included in Appendix R.

Input was also obtained through meetings with key city working groups, including the City of Long Beach Executive Management Team, the City of Long Beach Economic Development and infrastructure Committee, the Long Beach Redevelopment Agency Board, city staff, and public service providers.



## Organization of the Street Enhancement Master Plan

The Street Enhancement Master Plan includes the following sections:

- I. Introduction (this section);
- II. Executive Summary, which describes key recommendations of the Street Enhancement Master Plan.
- III. Infrastructure Improvements, which describes proposed improvements to the basic infrastructure of North Long Beach, including pavement reconstruction and restructuring, concrete reconstruction, and storm drain improvements, in order of priority;
- IV. Streetscape Improvements, which describes proposed improvements to enhance major streets in North Long Beach, including gateways, street trees, medians, traffic calming and pedestrian amenities, in order of priority;
- V. Streetscape Improvements by Street, which describes specific improvements recommended for each major street.

These sections are followed by a series of technical appendices, which provide detailed documentation of the information summarized in the body of the report.

## II. EXECUTIVE SUMMARY

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The North Long Beach Street Enhancement Master Plan identifies and prioritizes infrastructure and streetscape improvements that are needed in North Long Beach. Infrastructure improvements include pavement reconstruction and restructuring for local and arterial streets and alleys, concrete reconstruction, ADA ramps and storm drain improvements. Streetscape improvements include traffic calming and pedestrian amenities, gateway landscaping, street trees and landscaped medians, as well as other landscape opportunities. Proposed streetscape improvements are limited to the 10 arterial streets in North Long Beach.

The Street Enhancement Master Plan identifies a total of approximately \$123 million of infrastructure improvements and \$30 million of streetscape improvements. Because this amount far exceeds the available funds for such improvements, a key element of the Street Enhancement Master Plan was to prioritize the needed improvements. Proposed infrastructure improvement priorities are based on a technical evaluation of all streets and alleys in North Long Beach. Recommended priorities for streetscape improvements are based largely on input received from the North Long Beach Strategic Guide Steering Committee and from community members at two workshops.

The Redevelopment Agency had determined that the bonding capacity for the North Long Beach Redevelopment Area could yield \$14 to \$18 million for public work needs, which would need to be utilized during the next 3 years. A Three-Year Specific Action Plan was developed to identify improvements that should be undertaken in the next three years, using that funding.

This Executive Summary first summarizes the infrastructure and streetscape improvement needs evaluated by the Street Enhancement Master Plan. It then outlines the proposed Three-Year Specific Action Plan.

### A. Infrastructure Improvement Needs

**Pavement Restructuring and Reconstruction.** Regardless of maintenance, roadway pavement must be replaced at some point in time. It can be replaced in one of two ways: restructuring or reconstruction. Pavement restructuring consists of adding additional thickness of asphalt on top of a properly prepared existing surface of roadway. Generally, it is necessary to dig out selected areas that are severely deteriorated to provide a uniform life span for the pavement overall. If the pavement is allowed to become too severely deteriorated, it must be completely reconstructed, which includes: removal of asphalt and base material, re-grading of the underlying soil, and replacement of the base material and asphalt. Roadway reconstruction costs are on the order of 3 times pavement

restructuring. Thus, in the long run, upgrading pavements at the appropriate time can yield major savings.

All streets in North Long Beach were surveyed and were ranked with respect to their need for reconstruction or restructuring.

**Alley Pavement.** All alleys in North Long Beach were surveyed. The condition of each alley was evaluated. Needed improvements were identified.

**Concrete Curbs, Gutters and Sidewalks.** All concrete curbs, gutters and sidewalks were surveyed by the City in a previous inventory. The following quantities of concrete reconstruction are required within the North Long Beach Redevelopment Area: 245,620 linear feet of curb and gutter and 616,499 square feet of sidewalk.

In general, curb and gutter reconstruction should be performed at the same time as pavement restructuring, because 1) the pavement and the curb and gutter are physically adjoining; and 2) the longevity of the pavement restructuring depends on good drainage via the gutter. On the other hand, sidewalk reconstruction could be undertaken on an area wide concrete repair project, and perhaps include the curb and gutter, which would be reconstructed prior to restructuring in the area. However, simultaneous construction of all improvements would minimize disruption to homeowners, businesses, pedestrians and motorists.

**Americans With Disabilities Act (ADA) Access Ramps.** Ramps that transition from sidewalks to streets are required to permit individuals with disabilities to cross those streets in the same locations that individuals without disabilities can cross. The City of Long Beach has been proactive in the installation of ADA ramps, yet ADA ramps are still missing at the vast majority of locations on residential streets in North Long Beach. In addition, in many locations where ramps do exist, they are non-compliant because Federal design standards for ADA ramps have been modified in recent years. Court rulings have held that when a street is restructured, ramps must be brought within current ADA standards.

All locations at which ADA ramps are required in North Long Beach were surveyed. A total of 2,100 ADA ramps are required in North Long Beach, either to replace existing ones or to install them for the first time.

**Storm Drainage System Improvements.** Boyle Engineering completed an assessment of the storm drainage system in North Long Beach in 1991. That study identified \$39 million of improvements to the existing storm drainage system needed to provide North Long Beach with an adequate back-

bone storm drain system on which to build future improvements. In addition, the Department of Public Works has been collecting information based on field observations and complaints during the rainy season. These improvements, which would cost on the order of \$6 million, have been given priority over the improvements identified in the Boyle Engineering study.

## **B. Proposed Streetscape Improvements**

**Traffic Calming and Pedestrian Amenities.** The Street Enhancement Master Plan recommends that traffic calming and pedestrian amenities be provided in designated village centers and neighborhood commercial nodes, as well as along streets adjacent to new multi-family and mixed use developments. Recommended improvements in these areas include corner curb extensions, enhanced paving of crosswalks and pedestrian-activated signals at mid-block crossings to make it easier for pedestrians to cross the street and to make them more visible to motorists. Other recommended improvements include wider sidewalks in locations where the existing sidewalks are less than 10 feet wide, pedestrian-scale street lights, bus shelters, benches and chairs, and trash receptacles.

**Street Trees.** Street trees should be planted along all 10 arterials where sidewalks are wide enough to accommodate them. With the exception of Atlantic Avenue between 61st Street and Del Amo Boulevard, where the sidewalks are 6.5 feet wide, and Market Street and Del Amo Boulevard, which have 5-foot wide sidewalks, all the arterials have sidewalks that are wide enough to accommodate street trees.

At bus stops and in village centers and neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways.

Where street trees are in parkways that parallel medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Landscaped Medians.** On existing raised medians on Atlantic Avenue, Artesia Boulevard and Del Amo Boulevard, paved areas should be removed and replaced with landscaping. The existing raised, unlandscaped medians on Cherry Avenue and South Street near the rail crossing should be landscaped.

Where feasible, new raised, landscaped medians should be provided along the other arterials. The following street segments are too narrow to accommodate medians: Orange Avenue, South Street west of Cherry Avenue, and Downey Avenue between the Artesia Freeway and Poppy Avenue. A traffic study should be prepared prior to the design of any median.

**Gateway Enhancements.** Many Steering Committee and community members expressed concern about the appearance of the major corridors at entries to the city and the first impression that such an appearance gives to visitors and residents alike. To address this concern, the Street Enhancement Master Plan recommends that typical street tree and median landscaping be enhanced at the gateways by additional landscaping in the medians and parkways and, for gateways at the north, landscaping of the street edges of Southern California Edison rights-of-way. Gateway landscaping should include several common elements that will be used at all gateways in conjunction with the individual landscape palette for each street. The common elements for each gateway may include 3 to 6 Canary Island Palms or Mexican Date Palms with clusters of Flax or other drought-tolerant subtropical plants in conjunction with a gateway sign and uplighting of trees and sign. Where there are medians at the gateways, these elements should be located in the medians. Where medians are not feasible, the supplemental landscaping should be provided in the parkways.

**Other Landscape Improvements.** The Street Enhancement Master Plan also identifies the need for permanent pocket parks, temporary landscaping of vacant lots and back-up lot landscaping, and suggests landscape guidelines for front yard setbacks and parking lots along the arterial streets.

**Public Art.** Public art should be incorporated into streetscape improvements at pedestrian nodes.

## **C. Three-Year Specific Action Plan**

The recommended Three-Year Specific Action Plan, which is estimated to cost \$18 million, including direct construction, construction contingency, design and construction inspection, includes the following improvements:

- ☐ Reconstruction of 1.23 miles of streets, including curbs, gutters and access ramps.
- ☐ Restructuring of 15.95 miles of streets, including curbs, gutters and access ramps.
- ☐ Paving of all dirt alleys.
- ☐ Pedestrian improvements in the North Village Center on Atlantic Avenue between 56th and 59th Streets and on Long Beach Boulevard 1 block north and 2 blocks south

of Market Street, including corner curb extensions at all 4 intersections.

- Gateway improvements on the arterials streets where they enter the City of Long Beach. Recommended gateway improvements include landscaped medians with a gateway sign and uplighting, as well as street trees in landscaped parkways. Street segments proposed to receive gateway improvements include:

- Atlantic Avenue from Atlantic Place to Artesia Boulevard;
- Long Beach Boulevard from Greenleaf Boulevard to south of the 91 Freeway;
- Artesia Boulevard from the western city limit to Long Beach Boulevard and from Downey Avenue to Obispo Avenue;
- Cherry Avenue from the northern City limit to Artesia Boulevard;

- South Street from Downey Avenue to Obispo Avenue;
- Del Amo Boulevard from the Los Angeles River to Long Beach Boulevard and from Cherry Avenue to Orange Avenue;
- Paramount Boulevard from 70<sup>th</sup> Street to Artesia Boulevard;
- Downey Avenue from 70<sup>th</sup> Street to Artesia Boulevard.

- Street trees along the entire length of Long Beach Boulevard and along the entire length of South Street in North Long Beach.

Figure II-1 shows infrastructure improvements recommended for completion in the next 3 years. Figure II-2 shows streetscape improvements recommended for completion in the next 3 years. Table II-1 lists the costs of each improvement in the Three-Year Action Plan.



Figure II-1. Three-Year Specific Action Plan for Infrastructure Improvements

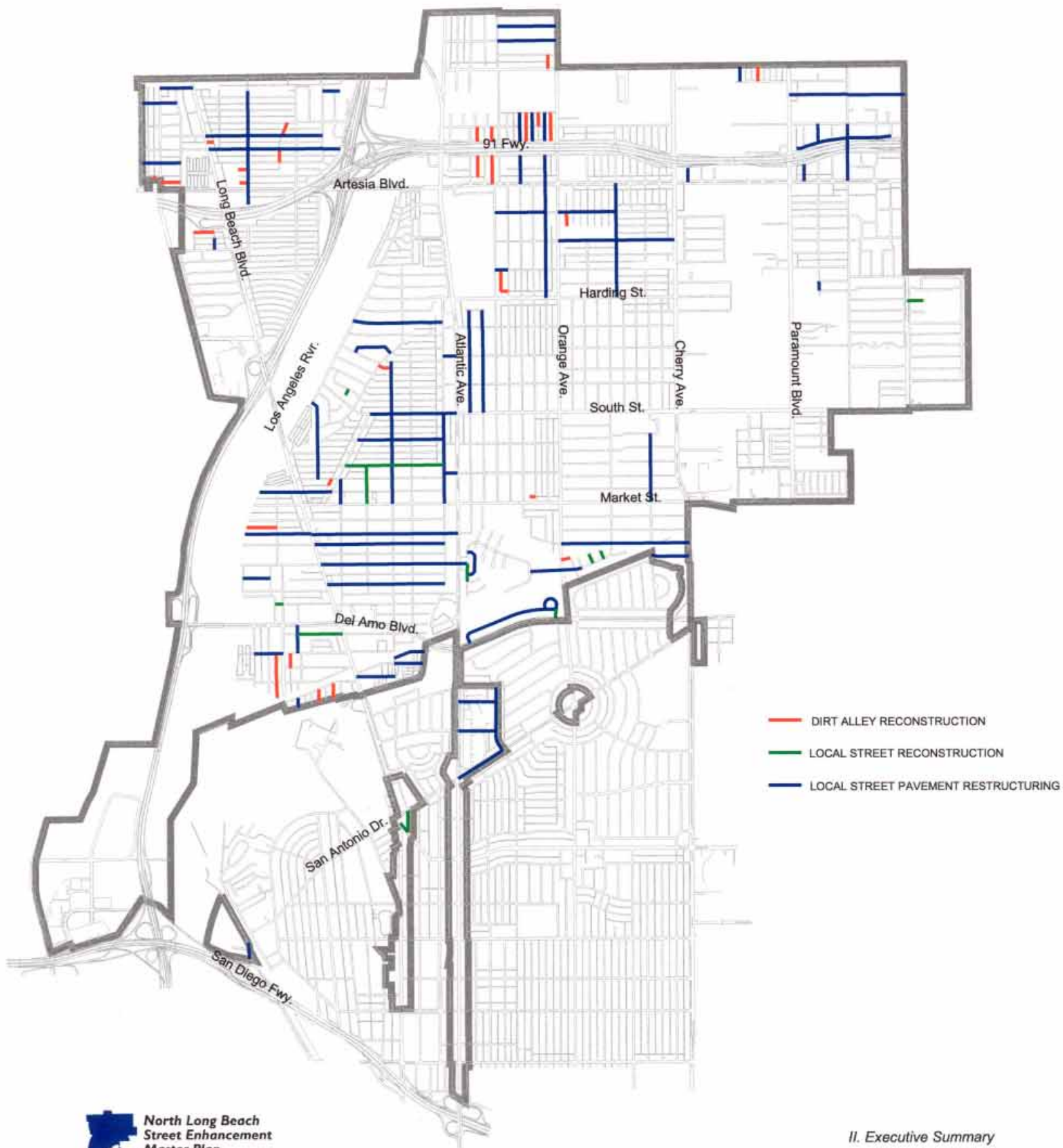
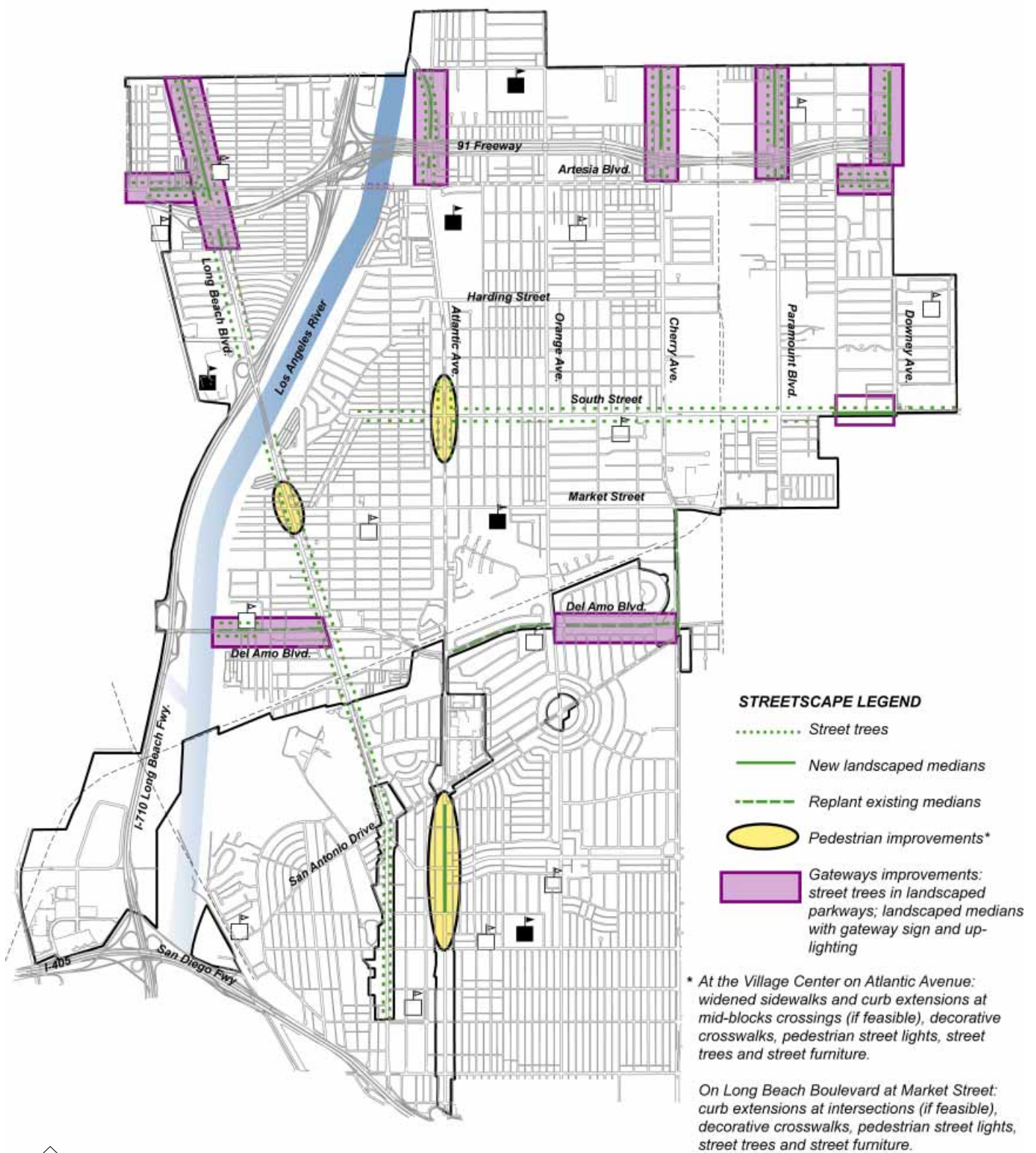




Figure II-2. Three-Year Specific Action Plan for Streetscape Improvements



↑  
1" = 3,200'



**Table II-1. Three-Year Specific Action Plan (2002\$)**

|   | <b>Direct<br/>Construction</b> | <b>Contingency<sup>1</sup></b> | <b>Traffic<br/>Study</b> | <b>Design and<br/>Construction<br/>Management<sup>2</sup></b> | <b>Total</b>        |
|---|--------------------------------|--------------------------------|--------------------------|---|---------------------|
| <b>Infrastructure Improvements</b>                        |                                |                                |                          |   |                     |
| Street Reconstruction                                     | \$984,843                      | \$147,726                      |                          | \$283,142   | \$1,415,711         |
| Street Restructuring                                      | \$4,385,714                    | \$657,857                      |                          | \$1,260,893   | \$6,304,464         |
| Pave Dirt Alleys  | \$1,909,050                    | \$286,358                      |                          | \$658,622   | \$2,854,030         |
| <b>Subtotal - Infrastructure</b>                          |                                |                                |                          |   | <b>\$10,574,205</b> |
| <b>Streetscape Improvements</b>                           |                                |                                |                          |   |                     |
| <b>Atlantic Avenue</b>                                    |                                |                                |                          |   |                     |
| North Village Center Pedestrian Improvements              | \$960,000                      | \$144,000                      | \$7,500                  | \$276,000   | \$1,387,500         |
| Gateway Landscaping - Atlantic Pl. to Artesia Blvd.       | \$288,600                      | \$43,290                       | \$7,500                  | \$82,973  | \$422,363           |
| <b>Long Beach Boulevard</b>                               |                                |                                |                          |   |                     |
| Market St. Pedestrian Improvements                        | \$445,000                      | \$66,750                       | \$7,500                  | \$127,938   | \$647,188           |
| Gateway Landscaping - Greeneaf Blvd. to so. of 91 Fwy.    | \$459,951                      | \$68,993                       | \$7,500                  | \$132,236   | \$668,679           |
| Street Trees <sup>3,4</sup> - along remainder of street   | \$738,745                      | \$110,812                      |                          | \$212,389   | \$1,061,945         |
| <b>Artesia Boulevard</b>                                  |                                |                                |                          |   |                     |
| Gateway Landscaping - west city limit to Long Beach Blvd. | \$143,800                      | \$21,570                       |                          | \$41,342  | \$206,712           |
| Gateway Landscaping - Downey Av. To Obispo Av.            | \$129,600                      | \$19,440                       |                          | \$37,260  | \$186,300           |
| <b>Cherry Avenue</b>                                      |                                |                                |                          |   |                     |
| Gateway Landscaping - north city limit. - Artesia Blvd.   | \$368,146                      | \$55,222                       | \$7,500                  | \$105,842   | \$536,710           |
| <b>South Street</b>                                       |                                |                                |                          |   |                     |
| Gateway Landscaping - Downey Av. To Obispo Av.            | \$243,600                      | \$36,540                       | \$7,500                  | \$70,035  | \$357,674           |
| Street Trees <sup>3,4</sup> - along remainder of street   |                                |                                |                          |   |                     |
| Atlantic Av. to Obispo Av. <sup>4</sup>                   | \$432,493                      | \$64,874                       |                          | \$124,342   | \$621,708           |
| Dairy Av. to Atlantic - in-ground irrigation              | \$65,000                       | \$9,750                        |                          | \$18,688  | \$93,438            |
| <b>Del Amo Boulevard</b>                                  |                                |                                |                          |   |                     |
| Gateway Landscaping - LA River to Long Beach Blvd.        | \$116,221                      | \$17,433                       |                          | \$33,413  | \$167,067           |
| Gateway Landscaping - Cherry Av. to Orange Av.            | \$97,708                       | \$14,656                       |                          | \$28,091  | \$140,455           |
| <b>Paramount Boulevard</b>                                |                                |                                |                          |   |                     |
| Gateway Landscaping - 70th St. to Artesia Blvd.           | \$376,751                      | \$56,513                       | \$7,500                  | \$108,316   | \$549,079           |
| <b>Downey Avenue</b>                                      |                                |                                |                          |   |                     |
| Gateway Landscaping - 70th St. to Artesia Blvd.           | \$258,419                      | \$38,763                       | \$7,500                  | \$74,295  | \$378,977           |
| <b>Subtotal - Streetscape Improvements</b>                |                                |                                |                          |   | <b>\$7,425,795</b>  |
| <b>Total</b>  |                                |                                |                          |   | <b>\$18,000,000</b> |
| <b>Other Funding Sources</b>                              |                                |                                |                          |   |                     |
| <b>Atlantic Avenue</b>                                    |                                |                                |                          |   |                     |
| Landscaped Medians - San Antonio Rd. - Roosevelt Av.      | \$236,500                      | \$35,500                       | \$15,000                 | \$68,000  | \$355,000           |

<sup>1</sup> 15% of Direct Construction

<sup>2</sup> 25% of Direct Construction + Contingency for all improvements, except alleys: 30% for alleys

<sup>3</sup> Includes removal of concrete to provide continuous 4-foot-wide parkways, except at bus stops and village centers and neighborhood commercial nodes, where 4' x 8' tree wells should be provided.

<sup>4</sup> Cost includes 3 years of weekly watering by watering truck; however, in-ground irrigation should be installed where feasible.

### III. INFRASTRUCTURE IMPROVEMENTS

### III. INFRASTRUCTURE IMPROVEMENTS

#### A. Overview

The infrastructure of public works facilities in North Long Beach has aged greatly over the many years since its various elements were originally constructed. Many infrastructure improvements were constructed in the 1920's, 1930's, and 1940's. To a large extent, little upgrading has occurred since these early times.

One of the principal reasons for establishing the Redevelopment Area was to address the deteriorating infrastructure by providing a supplemental source of funding to reduce the backlog of needed improvements. This Master Plan is intended to specifically identify infrastructure deficiencies, quantify them and their costs, and provide an improvement program prioritized for the most cost effective approach to upgrading the infrastructure elements.

Most of the improvements considered have been assigned to categories within their class of improvement, e.g., street pavement restructuring, alley reconstruction, etc., to facilitate an understanding of the conditions of each element. These categories are defined in Section H. Exhibits are provided using these categories to represent deficiencies in a meaningful visual way. Report listings also are provided for each element, showing the condition category and priority.

Some of the infrastructure elements did not lend themselves to condition categories:

- 1) Storm drains are needed because of a lack of sufficient capacity in the drain lines, or the lack of a specific storm drain segment in an area with drainage problems, not due to their condition.
- 2) ADA ramps simply did not exist at many locations, or were substandard in terms of more recent requirements. Ramp improvements are mandated by federal law in conjunction with adjoining pavement restructuring or sidewalk construction.
- 3) Traffic improvement upgrades are required because of increased traffic volume that has occurred from growth in the surrounding area.

Not all infrastructure improvements were inventoried in this study. For example, sewers were not included, nor were area-wide traffic devices, such as traffic signs and signals. These systems are relatively complete and in good condition, and the availability of funding will be exhausted on the other more deficient systems summarized in the following pages. Only the traffic signals and other traffic devices located where curb extensions or sidewalk widening are proposed are recommended for upgrade.

The outcome of this report is the capability to make sound decisions concerning the expenditure of funds for infrastruc-

ture improvements in North Long Beach, such that the most benefit is gained from any funds expended. The essential tools are provided in the Appendix reports, Appendices B through N listing specific improvements in priority order. Direct evaluation of the magnitudes and relative conditions and priorities will lead to cost-effective direction of efforts to improve the North Long Beach infrastructure.

For convenience, complete alphabetic listings, one for streets and one for alleys, is provided in Appendix A. These can serve as cross references to find individual streets or alleys on other reports, based on type of street or alley, priority value, and category. Streets in Pavement Category 0 (pavement in good condition), regardless of sidewalk condition, cannot be cross-referenced, because they are not listed for improvement in any other report.

#### B. Roadway Pavement

**Background.** Regardless of maintenance, roadway pavement must be replaced at some point in time. It can be replaced in one of two ways: restructuring or reconstruction. Pavement restructuring consists of applying an additional thickness of asphalt on top of a properly prepared existing surface of roadway. Generally, it is necessary to dig out selected areas that are severely deteriorated to provide a uniform life span for the pavement overall. Timely pavement restructuring is critical to minimizing the life-cycle cost of roadway pavement. As time progresses, the amount of severely damaged pavement increases and the restructuring thickness requirement increases. This continual escalation of costs over time is the reason for prioritizing pavement upgrades based on cost effectiveness. If the pavement is allowed to become too severely deteriorated, it must be completely reconstructed, which includes: removal of asphalt and base material, re-grading of the underlying soil, and replacement of the new base material and asphalt. Roadway reconstruction costs are on the order of 3 times pavement restructuring. Thus, in the long run, upgrading pavements at the appropriate time can yield major savings.

**Which Streets Are Included in The Master Plan?** The primary purpose of the Master Plan with respect to street pavement is to identify and prioritize streets that should be reconstructed or restructured using Redevelopment Area funds.

The City of Long Beach has an on-going pavement management system for all streets in the city that qualify for Federal Highway funds and State of California Proposition C funds. Approximately 34 miles of streets in North Long Beach are included in this system and are referred to as "arterial" streets. The system of arterial roadways that qualify for Federal Highway funds is approved by the Federal Highway Administration (FHWA). State Proposition C funds are generally allocated to mass transit routes. The pavement management system

arterial streets include all streets in North Long Beach that are classified as Regional Corridors, Major Arterials, Minor Arterials and Collector streets by the Bureau of Engineering's "Functional Classification of Streets" in the Transportation Element of the General Plan, as well as some streets classified as Local Streets. The condition of the pavement on these arterial streets is evaluated every two years. Because reconstruction and restructuring of these arterial streets can be funded by federal and state funds and because there are no similar funding sources available for streets that are not in the pavement management system (termed "local" streets), it was decided that, in general, only local streets would be considered for Redevelopment Area funding and would, therefore, be included in this Master Plan. There is one significant exception to this general rule: the 10 streets proposed for streetscape improvements (approximately 27 miles of streets) were included in the Master Plan, so that, if the location of a needed restructuring or reconstruction corresponded with the location of proposed streetscape improvements, all improvements could be undertaken at the same time to minimize disruption to businesses, residents and motorists. Restructuring and reconstruction of other arterial streets will continue to be undertaken as part of the citywide arterial improvement program.

Redevelopment funds cannot be used for maintenance or repairs. Therefore, localized areas of repair within a relatively long roadway segment in otherwise good condition are not included in the Master Plan. Each segment is taken in its average condition to be approached as a significantly large construction project. Local repairs would be accomplished by maintenance activities, not within the capital improvement program. This is especially important for concrete streets, for which repair, rather than reconstruction, is typically required, since failures of concrete pavements generally occur in localized areas where repairs of individual slabs will return the pavement to good condition. None of the concrete streets in North Long Beach warranted complete reconstruction. There are a few concrete streets in need of repair, including Long Beach Boulevard between 46th Street and Mountain View Street, which is identified in the citywide pavement management system as a high priority for concrete pavement repair. Funding sources available to streets in the pavement management system can be used to make concrete repairs on arterial streets. Because all of the streets with a significant priority for concrete pavement repair were 1) fundable by other sources and 2) repairs rather than improvements, they were not included in the Master Plan.

**Pavement Evaluation Process.** The process used to develop the master plan for pavement restructuring and reconstruction was as follows:

1. Develop an inventory of all streets to be included in this

Master Plan, as described above, and all alleys in North Long Beach by segments defined by change of condition, width, or other significant parameter. Both asphalt and concrete streets were included. The field survey was performed in conformance with data collection for the City's existing pavement management system. The data was processed in a separate database with formulas to enhance the priorities for traffic and provide more flexibility in cost calculations for the special needs in the district. Various sorting methods and GIS linkage were also more expeditious in the database for North Long Beach.

2. Survey and document pavement conditions of all street segments to provide cost estimates for upgrading the pavement and the present rate of deterioration. (The existing City pavement management system data gathering method was used.)
3. Rank the street segments by the savings to be realized by immediate improvement proportioned against the improvement costs in order to provide an essential return on the prospective investment.
4. The street segments in the pavement survey were linked to the City's GIS to allow for mapping of street groupings to assist in decision-making (see Appendices B through J).
5. Any arterial streets that have been restructured since the Master Plan assessment will be removed from the list of streets in need of restructuring in the next arterial street pavement assessment, which takes place every 2 years.
6. Any local streets that have been restructured will drop off the list and be replaced by the next priority street segment on the list.
7. If a street in need of restructuring has just been slurry sealed, it will remain on the list, since it will still need to be restructured.

**Results.** There are 185 miles of streets in North Long Beach. Based on the survey, a total of 91.50 miles of local streets could benefit from pavement restructuring at the present time, amounting to an estimated construction cost of \$18.13 million (see Figure III-1 for local street locations). A total of 8.14 miles of arterial streets, for which streetscape improvements are proposed, are in need of pavement restructuring, amounting to an estimated construction cost of \$4.31 million (see Figure III-2 for arterial street locations). Only 1.23 miles of local streets are so severely deteriorated that they need to be completely reconstructed, amounting to an estimated construction cost of \$0.92 million (see Figure III-3 for locations of streets in need of reconstruction highlighted by category).

Figures III-1 through III-3 show the locations of the segments in need of restructuring and reconstruction by category of cost effectiveness based on pavement conditions. Pavement,



Figure III-I. Local Street Pavement Restructuring

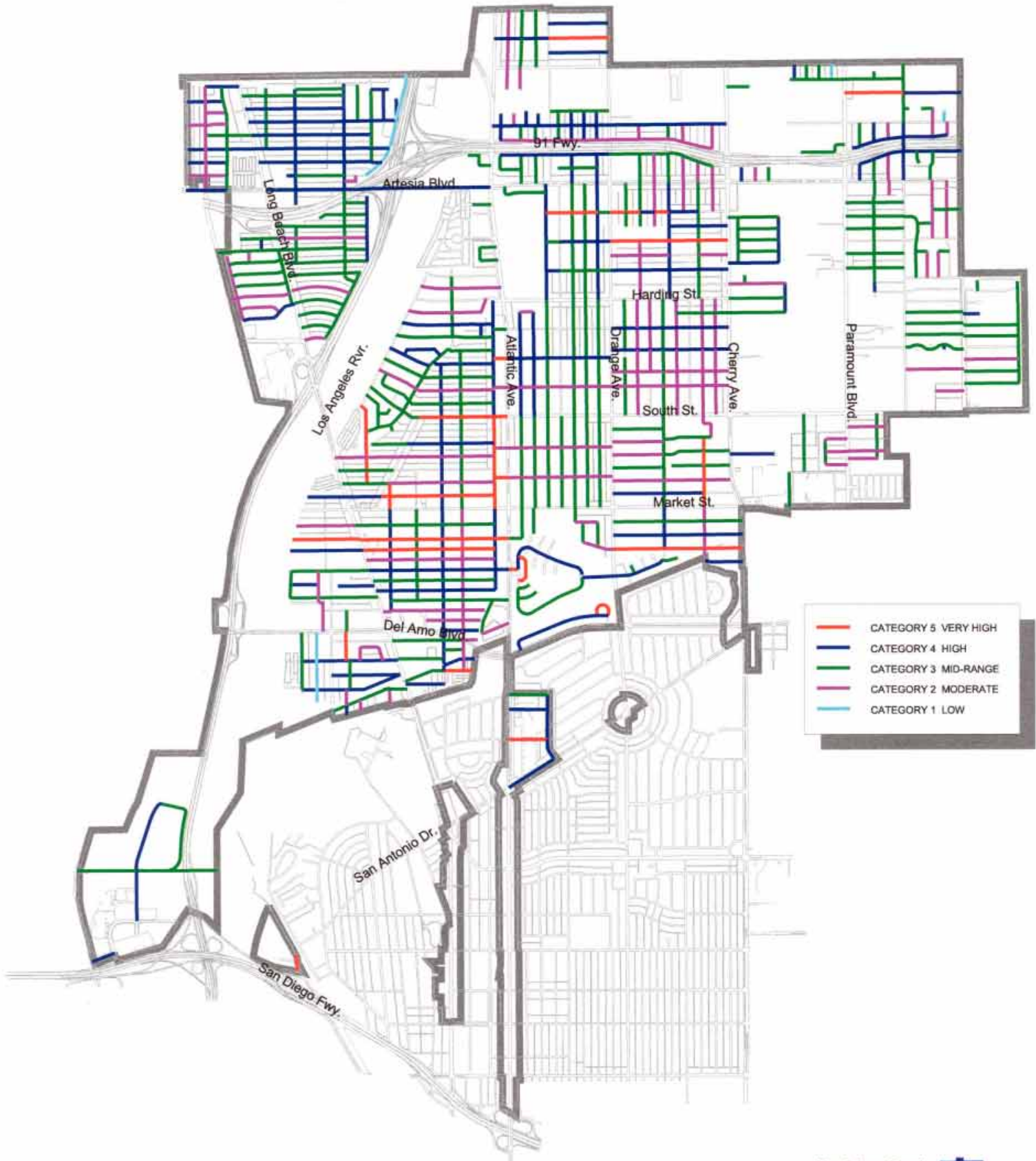


Figure III-2. Arterial Street Pavement Restructuring

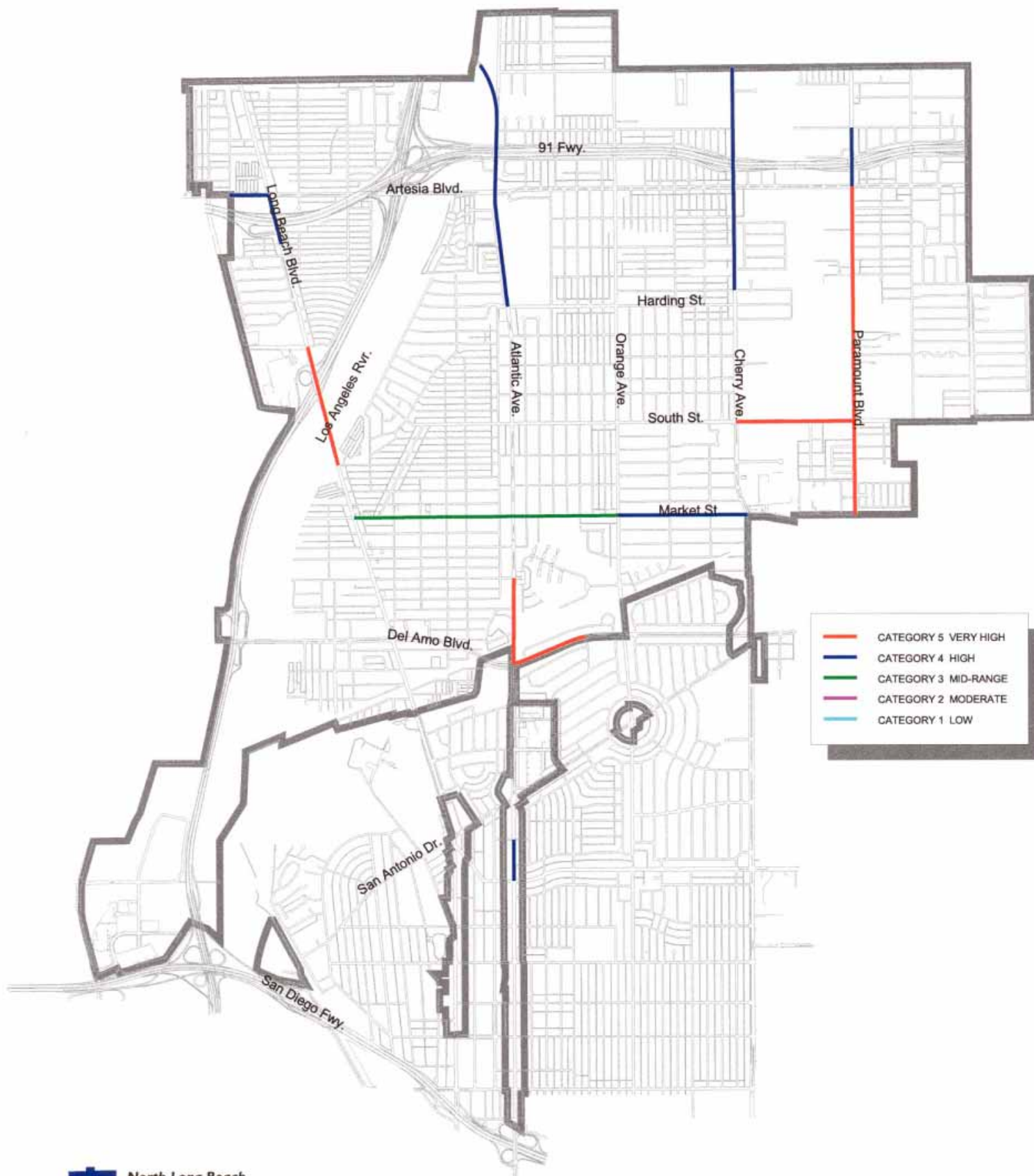
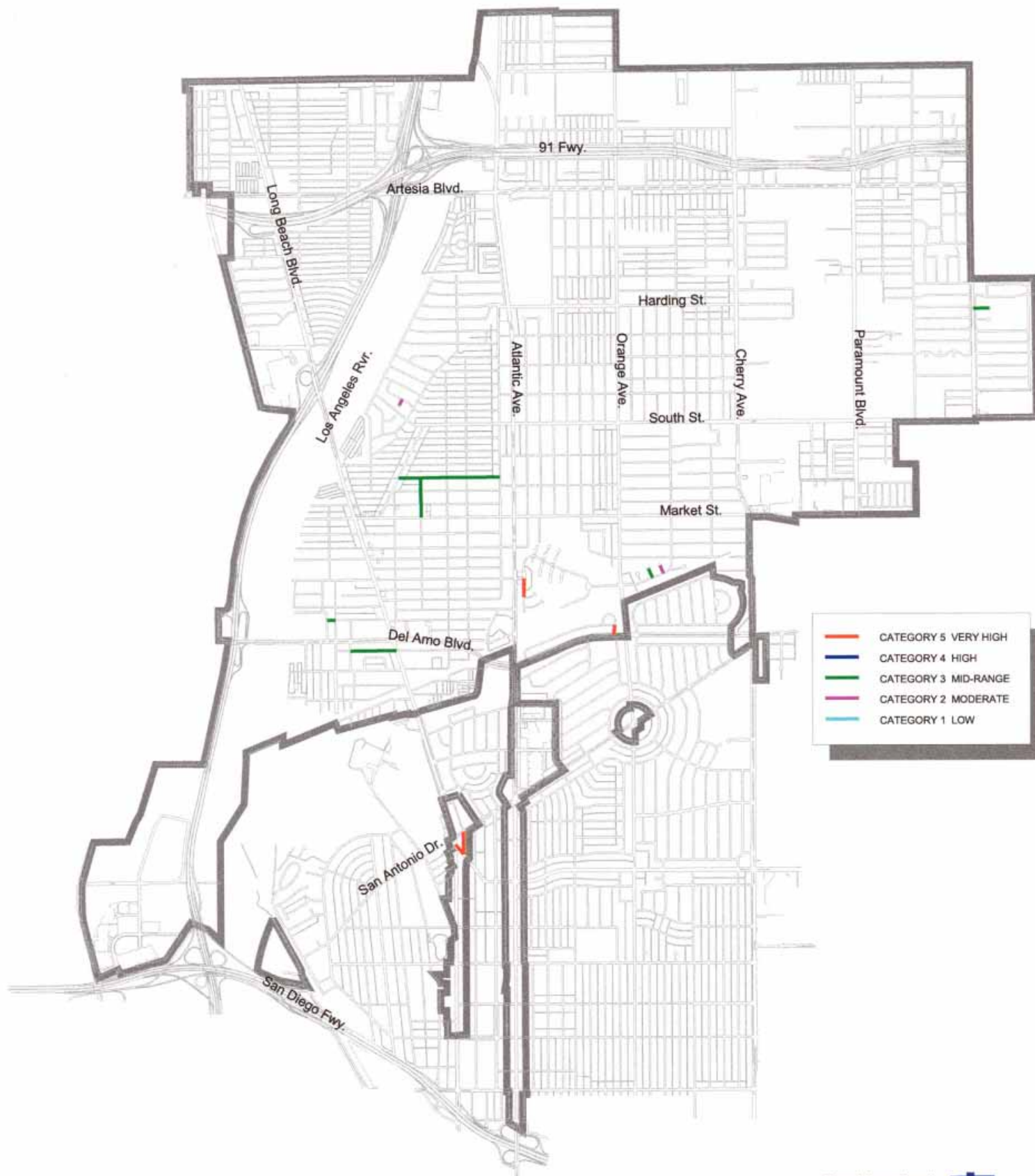




Figure III-3. Local Street Pavement Reconstruction



curb and gutter, and sidewalk condition states were broken down into 5 categories to provide a uniform way of gauging the condition of a particular element within a roadway segment. Category 5 represents the worst condition, while Category 1 represents minimal deterioration. Categories were established for the following elements:

- ❑ Asphalt Pavement for Restructuring with and without Curb and Gutter Reconstruction;
- ❑ Asphalt Pavement for Reconstruction with and without Curb and Gutter Reconstruction;
- ❑ Asphalt Alley Reconstruction to Concrete;
- ❑ Concrete Pavement Reconstruction; and
- ❑ Sidewalk Reconstruction.

Much of the Federal and State funding that is available is designated for improvement of arterial streets only. Federal funding always applies to the designated system of arterial roadways approved by the Federal Highway Administration (FHWA). Proposition C funds are generally allocated to mass transit routes. Local streets must be improved using principally other sources. Given this limitation on the funding of pavement restructuring on local streets, tax-increment revenue generated by the Redevelopment Area should be directed to local streets, rather than arterial roadways. Arterial roadway restructuring will continue to be undertaken as part of the citywide arterial improvement program.

### C. Alley Pavement

There are 34.42 miles of alleys in North Long Beach, which range from unpaved dirt to asphalt to concrete alleys. All of these alleys were surveyed. Of these, there are 2.45 miles of dirt alleys, which are proposed to be constructed in concrete at a cost of \$2.20 million (see Figure III-4 for locations). There are 7.11 miles of asphalt alleys in need of reconstruction, at a cost of \$5.33 million, assuming such reconstruction is with concrete pavement per City standards (see Figure III-5). The advantage of a properly constructed concrete alley is that its life span is almost indefinite, as concrete strength actually increases with age, and the traffic in alleys is relatively light. Asphalt alleys require a "V" gutter drainage strip in the middle, which puts a joint on either side. That joint is coincident with traffic wheel paths and is susceptible to water damage from the flow line. Though costs are somewhat less for such an asphalt alley, the difference is not significant given the drastically shortened lifespan.

The existing concrete alleys essentially need only individual slab reconstruction, because of the reasons discussed above regarding concrete lifespan. There are inevitably parts of concrete slabs that break down due to special factors, such as utility cuts, which cause localized deterioration. The rates of deterioration are slow for concrete, so priorities are relatively low. There are 24.17 miles of concrete alleys that need

partial reconstruction, at an estimated construction cost of \$1.02 million (see Figure III-6). In Figure III-6, the category is represented by the color coding of the individual alleys. It is useful to review the naming convention for alleys used in the report listings and the database, since the vast majority have no mapped name assigned to them.

For some dirt alleys it may be most appropriate to simply close them by one of a few possible methods. This will be determined as the City moves into the design phase of the program on an alley-by-alley basis.

### Alley Naming Convention

1. Alley naming begins with the major street closest to and parallel to the alley. For example, an alley running parallel to and east of Atlantic Boulevard with no alleys between them, is named Alley East of Atlantic.
2. The major adjacent street always takes precedence in the name.
3. Occasionally, two alleys run parallel between two streets, for example, two alleys between Lime Street and Elm Street, which run north and south with Lime on the west. The two alleys would be Alley East of Lime and Alley West of Elm. This convention ensures, in every case, that locating an alley is as straightforward as locating a street, just by finding the street referenced in the alley's name.
4. Termination limits are typically the same as for street segments: the nearest cross street or cross alley at the end.

### D. Concrete Curbs, Gutters and Sidewalks

All concrete curbs, gutters, and sidewalks were surveyed by GIS location by the City in a previous inventory. The quantity of the needed concrete reconstruction was totaled for each street segment and forms part of the information available in this study. The following quantities of concrete reconstruction are needed in North Long Beach:

1. 245,620 linear feet of curb and gutter at a cost of \$7.06 million;
2. 616,499 square feet of sidewalk at a cost of \$3.54 million.

In general, curb and gutter reconstruction should be performed with pavement restructuring, because they are physically adjoining, and the drainage is carried by the gutter. If the pavement is not well drained, pavement deterioration is accelerated dramatically, greatly reducing the time before the next restructuring will be needed. The issue of public convenience comes into play as well: if curb and gutter and pavement are constructed together, disruption to homeowners, businesses, pedestrians, and motorists is reduced to a fraction of what it would be if each project were done separately.

Figure III-4. Dirt Alley Reconstruction

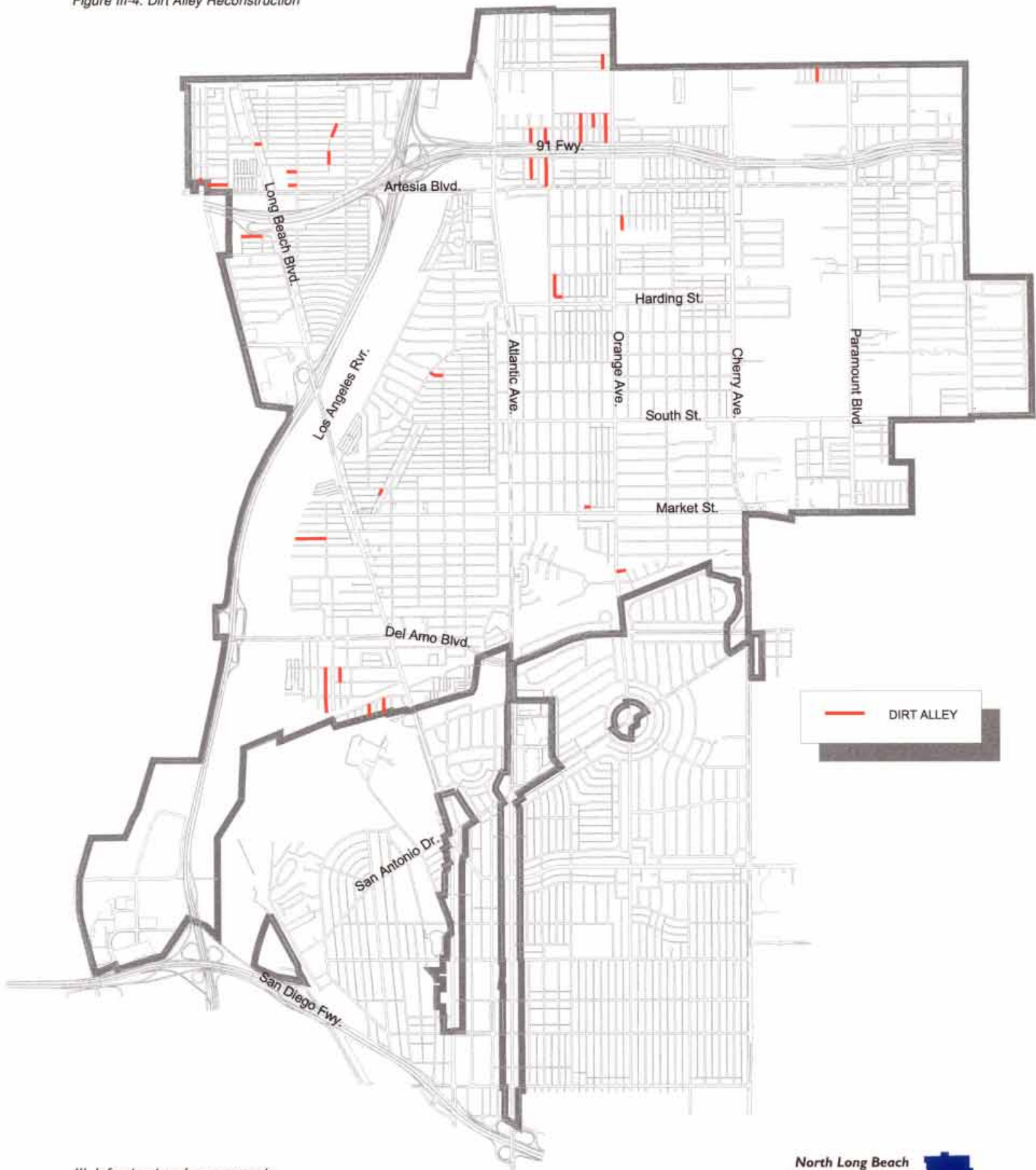




Figure III-5. Asphalt Alley Reconstruction

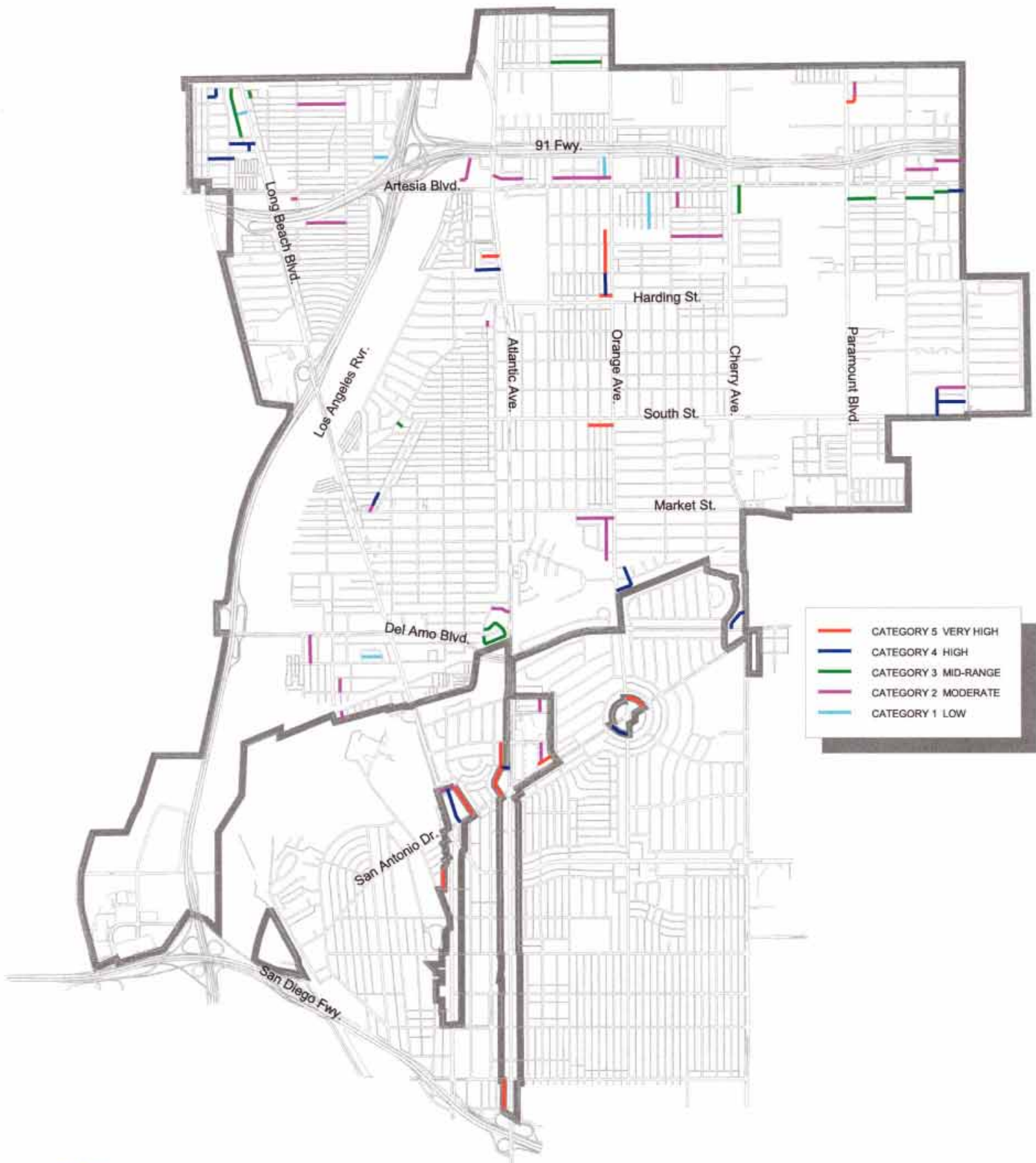
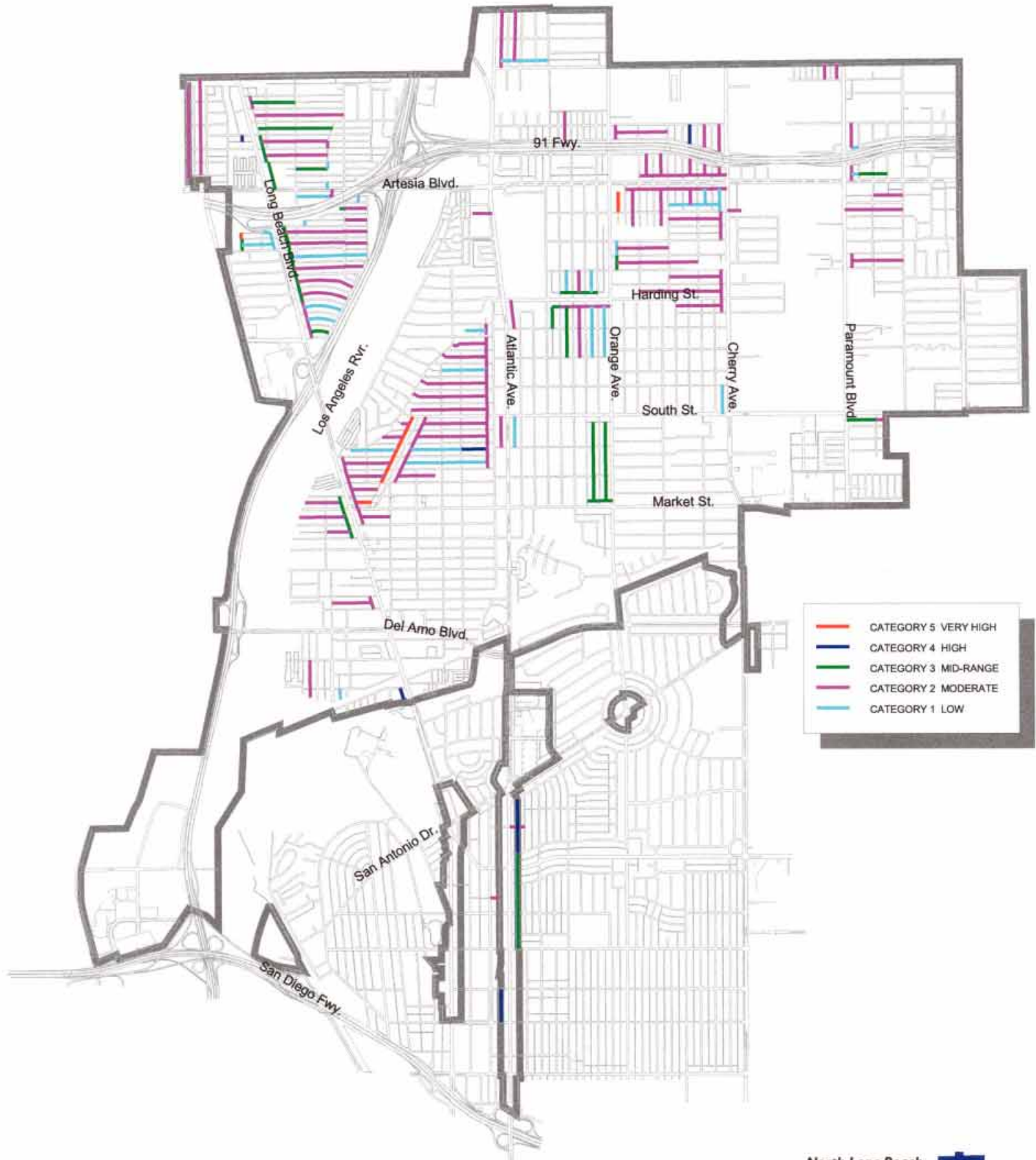


Figure III-6. Concrete Alley Reconstruction



To facilitate the decision to construct pavement with curb and gutter, the pavement priority is used as the central priority, with adjustments provided by the curb and gutter priority to attain an overall priority. These priority adjustments have been made based on weighting factors for curb and gutter damage. For example, a street (alleys do not have curb or sidewalk) with severely deteriorated curb and gutter would be pushed ahead of another street with the same pavement priority. These overall priorities are shown in Figure III-7 for local streets, Figure III-8 for arterial streets, and Figure III-9 for local street reconstruction.

Sidewalk reconstruction could be undertaken on an area-wide concrete repair project. Figures III-10 and III-11 show the locations in North Long Beach where sidewalk reconstruction is recommended by priority for local and arterial streets, respectively. Figure III-12 shows the locations where the need for sidewalk reconstruction is concentrated for local streets that are in need of reconstruction. Only the sidewalks needing repair that are adjacent to pavement in need of restructuring or reconstruction are included. Other sidewalk repairs are included in the City's annually funded concrete curb project.

### **E. Americans with Disabilities Act (ADA) Access Ramps**

Ramps that transition from sidewalks to streets are required to permit individuals with disabilities to cross those streets in the same locations that individuals without disabilities can cross. The City of Long Beach has been proactive in the installation of ADA ramps, yet ADA ramps are still missing at the vast majority of locations on residential streets in North Long Beach. In addition, in many locations where ramps do exist, they are non-compliant because Federal design standards for ADA ramps have been modified in recent years. Court rulings have held that when a street is restructured, ramps must be brought within current ADA standards.

All locations at which ADA ramps are required in North Long Beach were surveyed. A total of 2,100 ADA ramps are required in North Long Beach, either to replace existing ones or to install them for the first time. They should be replaced in the following order of priority:

1. 1,780 ramps where no ramp currently exists, at a cost of \$2.67 million.
2. 320 ramps to replace ramps rendered non-compliant by changes in Federal standards, at a cost of \$480,000.

Ramps must be constructed with pavement restructuring or reconstruction projects or with ADA ramp projects prior to pavement restructuring or reconstruction.

### **F. Storm Drainage System**

Boyle Engineering completed an assessment of the storm drainage system in North Long Beach in 1991. That study identified \$39 million of improvements to the existing storm drainage system. It did not address local flooding problems or locations to which subsurface storm drains should be extended. In addition, it addressed only storm drains 36 inches in diameter or larger. The infrastructure element of this master plan addresses new drains that are needed to provide North Long Beach with an adequate backbone storm drain system on which to build future improvements. Storm drain improvements to correct local deficiencies identified by City staff are included as well. Once the identified storm drains are constructed, a system will then be in place to allow for localized flooding to be mitigated by future local storm drain extensions.

The Department of Public Works has been collecting information based on field observations and complaints during the rainy season. Figure III-13 shows the locations of drainage improvements needed to address the problems identified by field observations and complaints. The improvements shown in Figure III-13 would cost \$6 million. These improvements have been given priority over the other improvements identified in the Boyle Engineering study.

The storm drains selected for installation are planned for construction ahead of the street pavement construction. As street segments come up for restructuring based on their priority, storm drain facilities in those segments should be constructed approximately one year before.

### **G. Traffic Improvements**

Concerns expressed by community members during the master planning process include:

1. Traffic speeds in excess of posted limits throughout North Long Beach and, in particular, on arterial streets.
2. Conflicts between vehicles and pedestrians, including speeding vehicles and failure of vehicles to stop for pedestrians at both striped and unstriped crosswalks (any intersection is a legal pedestrian crossing unless it is otherwise signed, regardless of whether or the crosswalk is striped).
3. High volumes of truck traffic on some arterial streets, including Paramount Boulevard and Artesia Boulevard.
4. Poor truck access to and from freeways, including the 710 to Long Beach Boulevard on- and off-ramps.
5. Overnight truck parking.

The proposed streetscape improvements include a limited number of changes to roadway configurations to improve pedestrian access. They include:



Figure III-7. Local Street Pavement Restructuring with Curb and Gutter

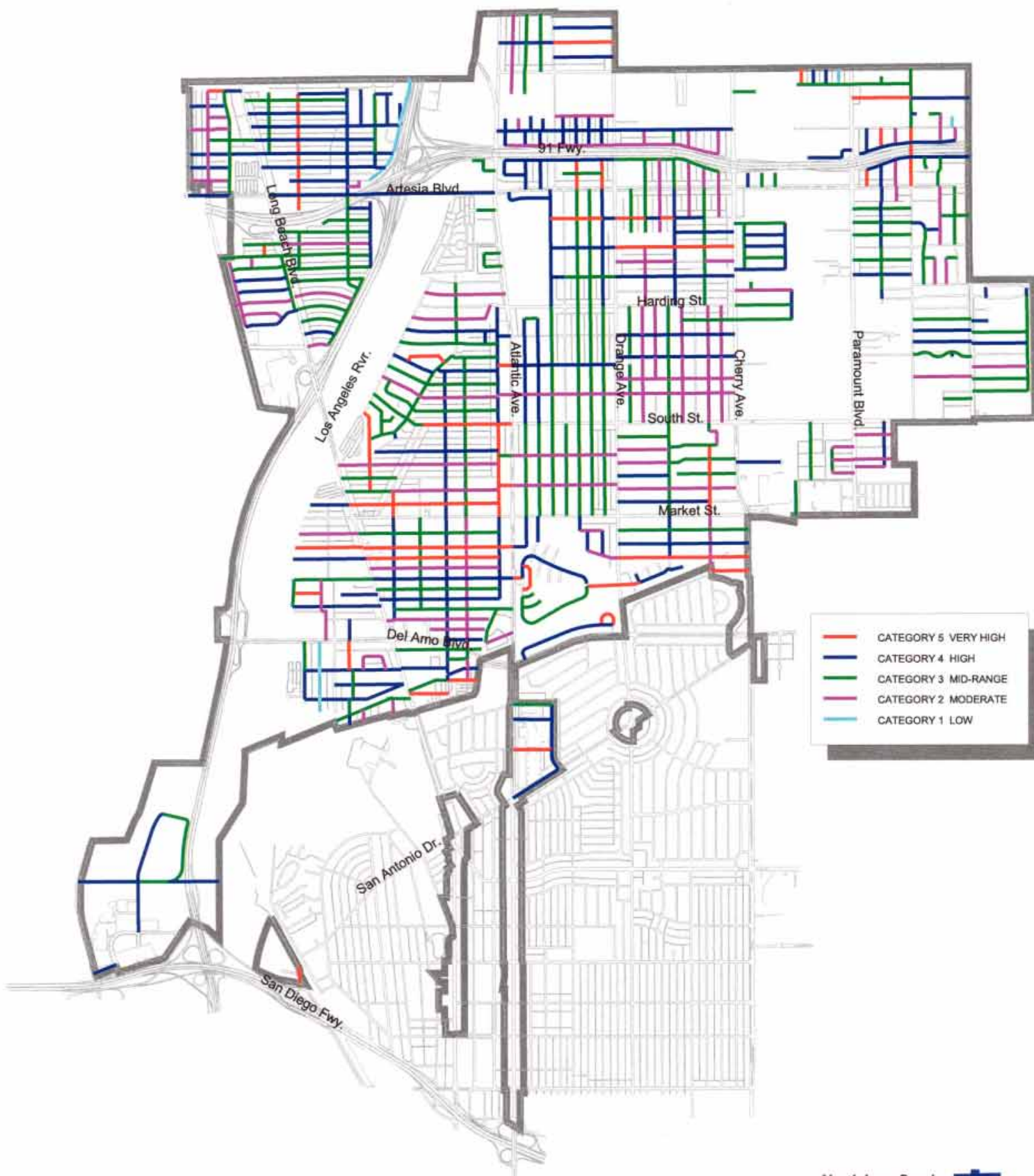




Figure III-8. Arterial Street Pavement Restructuring with Curb and Gutter

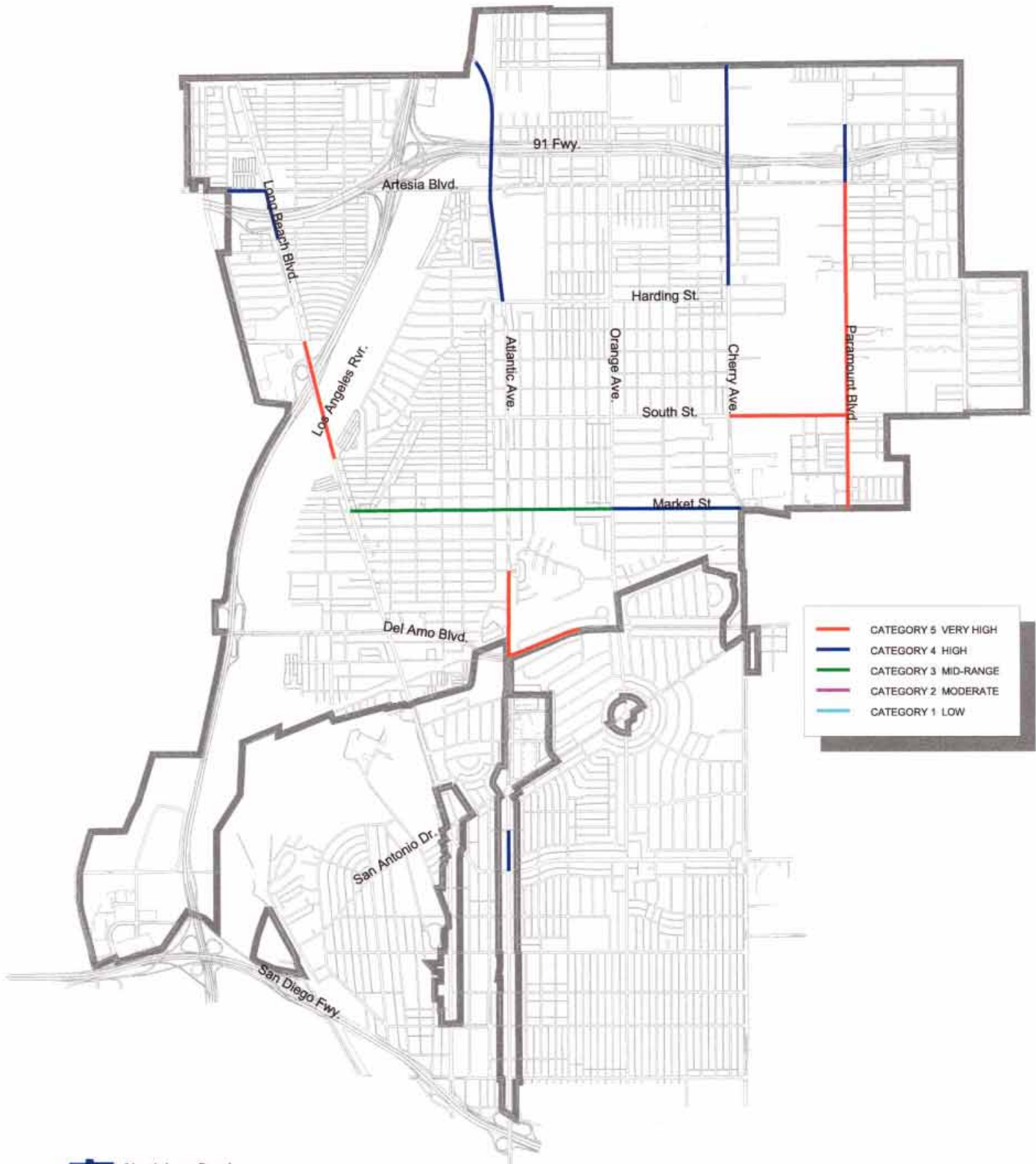


Figure III-9. Local Street Pavement Reconstruction with Curb and Gutter

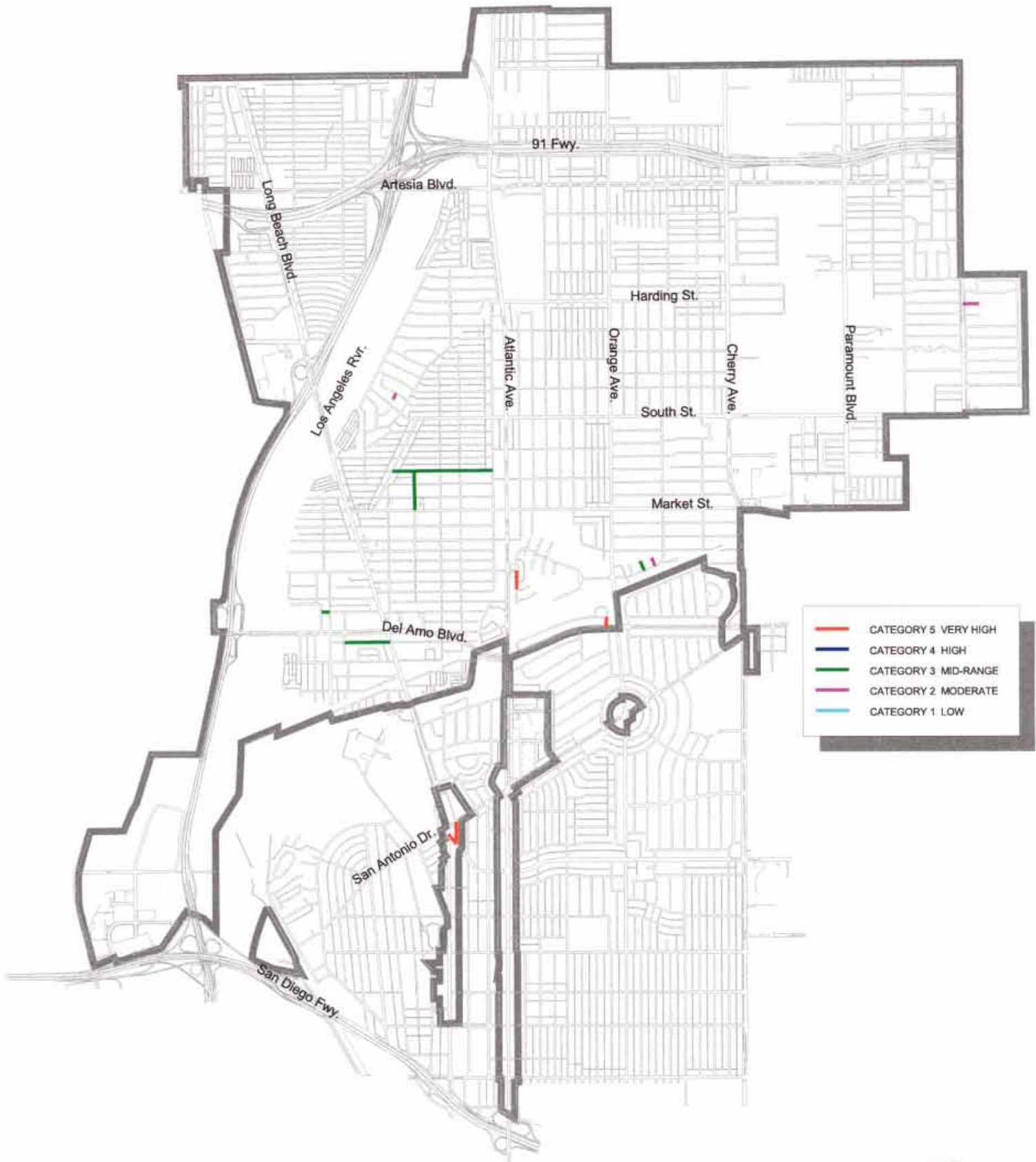


Figure III-10. Sidewalk - Local Street Pavement Restructuring List

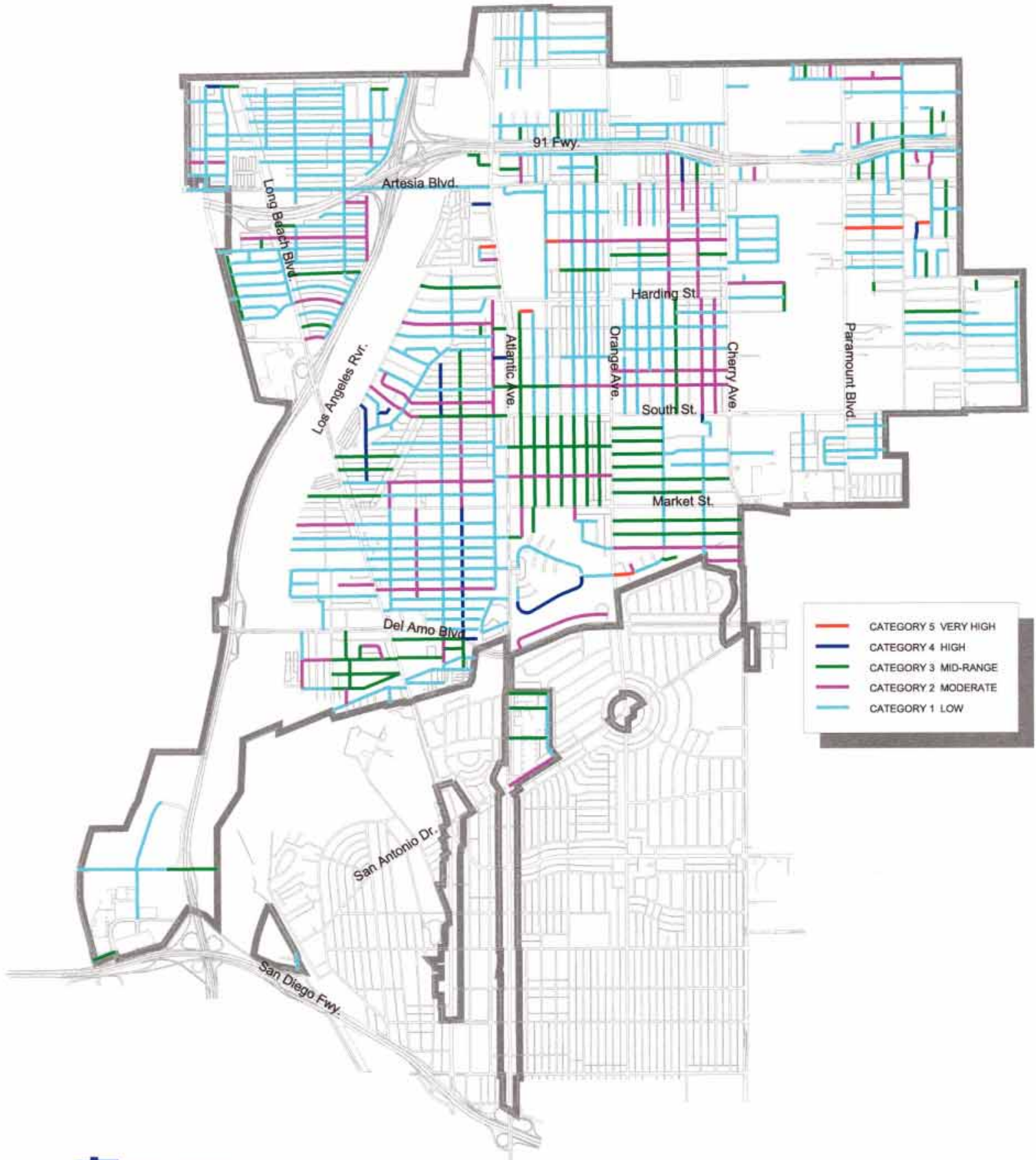




Figure III-11. Sidewalk - Arterial Street Pavement Restructuring List

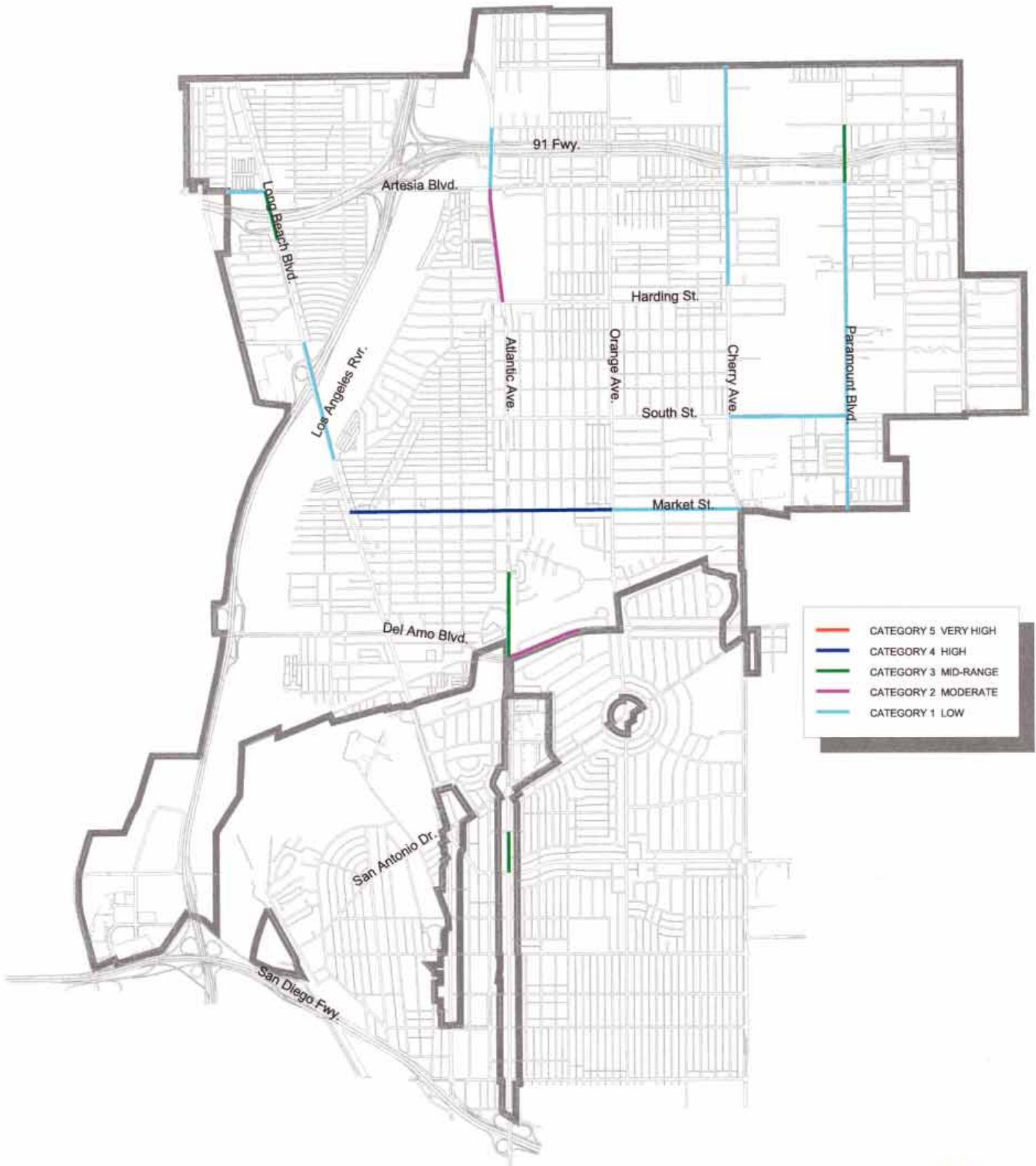


Figure III-12. Sidewalk - Local Street Pavement Reconstruction List

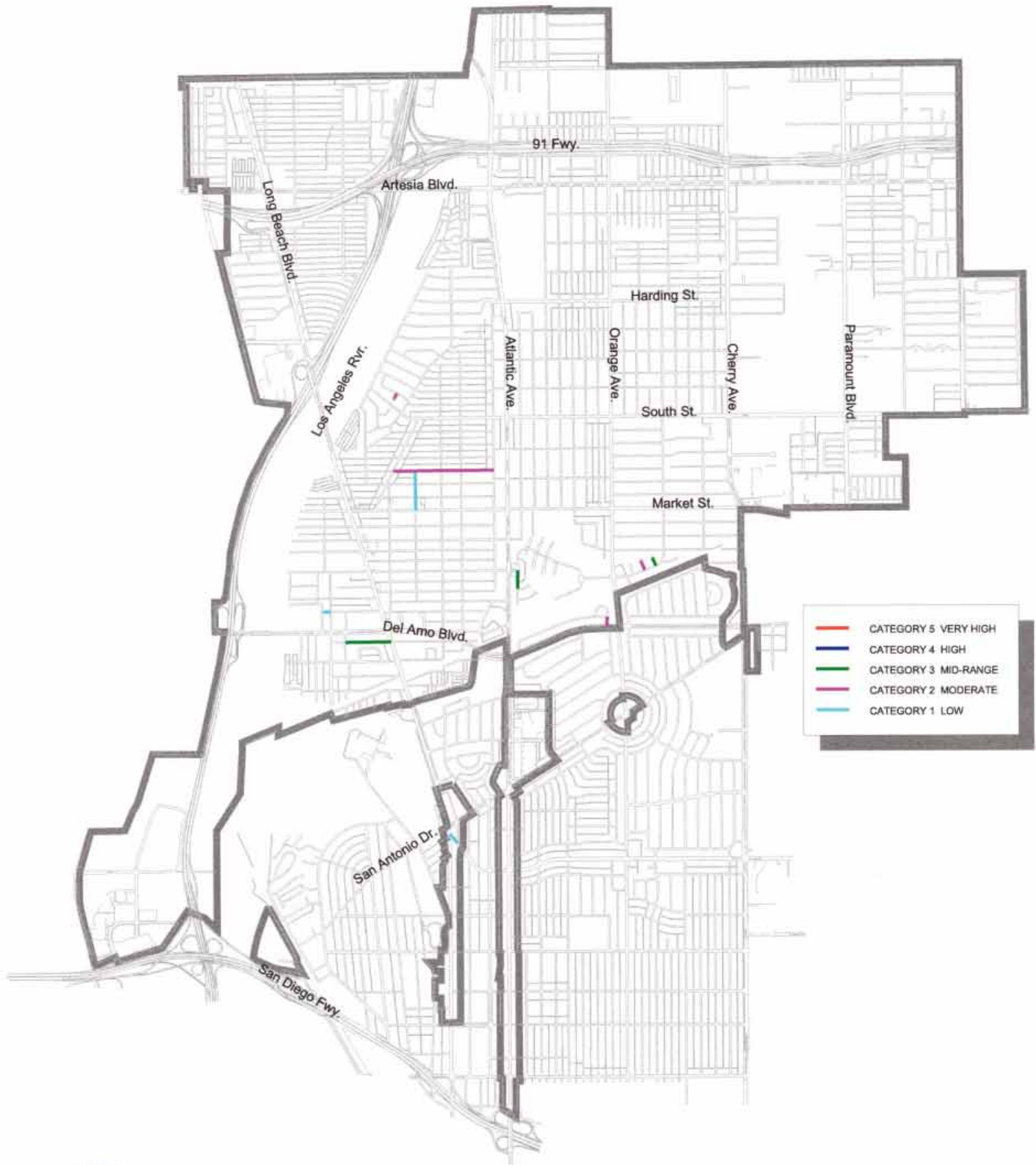
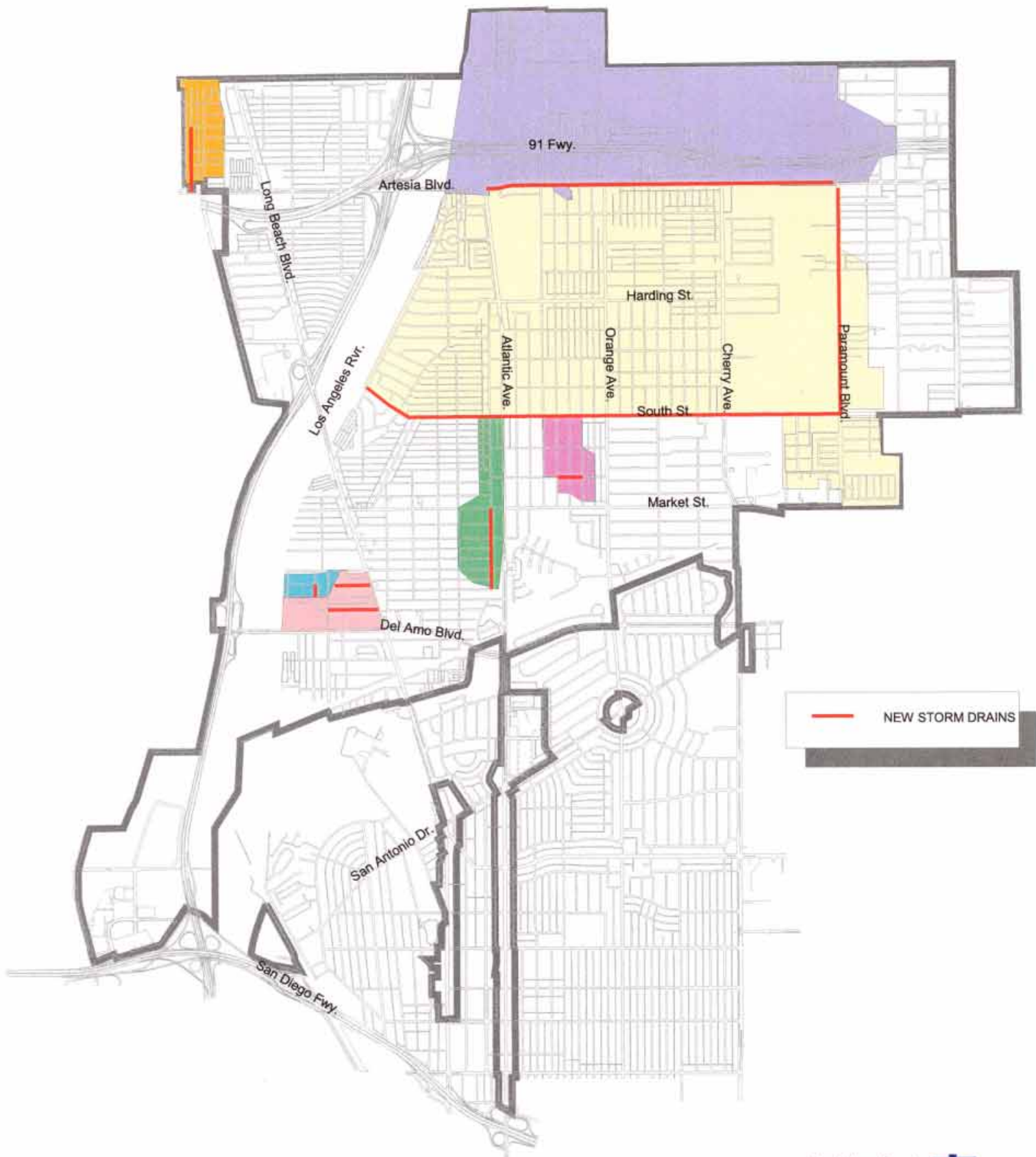


Figure III-13. Drainage Improvements



1. Eliminating the medians in the North Village Center on Atlantic Avenue between 56th Street and 59th Street and widening the adjacent sidewalks.
2. Installing corner curb extensions at 4 intersections in the vicinity of Long Beach Boulevard and Market Street.

## H. Priorities and Categorization

**Priorities.** Priority values for pavement were developed based on cost effectiveness of improvement. The rate of deterioration (per year) yields the benefit of pavement restructuring in the next year, i.e., essentially the savings by avoiding the increased costs incurred by delaying the pavement restructuring. Dividing the benefit by the cost normalizes the benefit for comparison of all projects. For example, a benefit at high cost is not as desirable as the same benefit at less expense.

The benefit/cost ratio is the recognized basis of engineering economics to accomplish such a comparison between numerous projects, and is the priority value for this system. The priority was, however, adjusted such that streets in very serious condition with high amounts of base failure would still have a high priority even though their costs would be relatively high. Ride quality and various other issues generally make this adjustment important. Typically, the priority for streets to be reconstructed is relatively low because the cost is very high.

Priorities for curb and gutter constructed with pavement required an adjustment of the base pavement priority by a factor proportional to the percentage of curb and gutter needing reconstruction. Sidewalk priorities were directly tied to the percentage of sidewalk needing reconstruction, because sidewalk was not intended to be constructed in the same project with pavement.

By developing the benefit/cost ratio in terms of dollars, the outcome is essentially a return on investment. The benefit/cost ratio is the priority, and a priority of .07 indicates a return on investment of 7 percent per year, since the benefit is the savings in one year. A street with priority of less than 3 percent may not be a cost-effective candidate, as returns on other investments are likely better. However, returns tend to the conservative side, because they will increase each year as deterioration rates increase with time, though actually a constant value is used. This general increase in rate of deterioration is why streets will move up in priority as time passes.

**Categorization.** Pavement, curb and gutter, and sidewalk condition states were broken down into categories I through 5, to provide a quick, uniform way of gauging the condition of a particular element within a roadway segment. The limiting values for each category were different for various elements, though the basic meaning of the category number is intended to be the same. For example, Category 5 means facility(s)

represented in the worst condition, while Category I means minimal deterioration. Categories were established for the following elements:

- ☐ Asphalt Pavement for Restructuring with and without Curb and Gutter Reconstruction;
- ☐ Asphalt Pavement for Reconstruction with and without Curb and Gutter Reconstruction;
- ☐ Asphalt Alley Reconstruction to Concrete;
- ☐ Concrete Pavement Reconstruction; and
- ☐ Sidewalk Reconstruction.

Parameters that define the categories for these elements vary in some cases because the nature of the value used to gauge the condition varied. For example, asphalt pavement was gauged based on priority for restructuring or reconstruction, while sidewalk was gauged by percentage of sidewalk needing repair. The unique differences will be described in detail individually for each case, but they are all structured to provide the basic condition states in terms of relative deterioration levels as follows:

|            |           |
|------------|-----------|
| Category 5 | Very high |
| Category 4 | High      |
| Category 3 | Mid-range |
| Category 2 | Moderate  |
| Category 1 | Low       |

A discussion of relevant considerations for each type of Category assignment follows.

Asphalt pavement restructuring categories are based on the priority for restructuring, i.e., the benefit/cost ratio for pavement restructuring on the street segment. This value is heavily weighted towards the condition of the pavement, principally if in fatigue with alligator cracking. The traffic index also has a strong effect on this value, since the benefit focuses on what is to be lost by delaying the pavement restructuring. Therefore, an arterial roadway in a particular category will tend to be in better condition than a local street in the same category. The priority value considers rapidly deteriorating pavement under high traffic loads and represents more closely the condition state in the near future. Parameters for AC restructuring are as follows:

|            |       |       |
|------------|-------|-------|
| Category 5 | >.20  |       |
| Category 4 | >.10  | <.20  |
| Category 3 | >.05  | <.10  |
| Category 2 | >.033 | <.05  |
| Category 1 | >0    | <.033 |

Asphalt restructuring with curb and gutter were combined with a combined priority of curb and gutter and pavement conditions. Curb and gutter reconstruction should be performed with pavement restructuring, because they are con-



tiguous improvements and the pavement relies on curb and gutter for a dependable lifespan through good drainage. Once again, pavement priority is the basis for the category number, and only minor adjustments were necessary, since the curb and gutter only amplify the base pavement priority. Category parameters are as follows:

|            |       |       |
|------------|-------|-------|
| Category 5 | >.20  |       |
| Category 4 | >.10  | <.20  |
| Category 3 | >.055 | <.10  |
| Category 2 | >.035 | <.055 |
| Category 1 | >0    | <.035 |

Asphalt pavement reconstruction has different parameters for the various categories, because the priority for such an improvement is lower, and the deterioration level is high in every case of this type. Therefore, the categories were broken down relative to each other based on priority within parameters as follows:

|            |       |       |
|------------|-------|-------|
| Category 5 | >.02  |       |
| Category 4 | >.012 | <.02  |
| Category 3 | >.007 | <.012 |
| Category 2 | >.003 | <.007 |
| Category 1 | >0    | <.003 |

Asphalt reconstruction with curb and gutter, when combined with curb and gutter, yields a minor shift in priorities. Category parameters are as follows:

|            |        |        |
|------------|--------|--------|
| Category 5 | >.02   |        |
| Category 4 | >.014  | <.02   |
| Category 3 | >.0077 | <.014  |
| Category 2 | >.0033 | <.0077 |
| Category 1 | >0     | <.0033 |

Asphalt alley reconstruction to concrete once again has low priority levels due to the relative cost of the construction, but the outcome for condition states has the full range from high deterioration to low deterioration, parameterized as follows:

|            |       |       |
|------------|-------|-------|
| Category 5 | >.05  |       |
| Category 4 | >.02  | <.05  |
| Category 3 | >.015 | <.02  |
| Category 2 | >.01  | <.015 |
| Category 1 | >0    | <.01  |

Concrete pavement reconstruction is generally localized to individual slab failures, and so lends itself to repair by reconstructing selected slabs, rather than full reconstruction. Traffic has a minor effect on parameter values, but the categories are a fairly direct representation of relative condition, or basically the percentage of total area requiring repair:

|            |      |      |
|------------|------|------|
| Category 5 | >.2  |      |
| Category 4 | >.12 | <.2  |
| Category 3 | >.05 | <.12 |

|            |      |      |
|------------|------|------|
| Category 2 | >.03 | <.05 |
| Category 1 | >0   | <.03 |

Sidewalk reconstruction is categorized by amount of sidewalk needing reconstruction per lineal foot of street as follows:

|            |      |      |
|------------|------|------|
| Category 5 | >.25 |      |
| Category 4 | >.12 | <.25 |
| Category 3 | >.05 | <.12 |
| Category 2 | >.03 | <.05 |
| Category 1 | >0   | <.03 |

## I. Infrastructure Improvement Costs

The construction costs for the proposed infrastructure improvements within the North Long Beach Redevelopment Project Area are summarized in Table III-1. The total magnitude of cost for the infrastructure improvements, including engineering design and construction management services, is estimated at \$123 million.

## J. Coordination with Utility Improvements

All utility providers located in the North Long Beach Redevelopment Project Area were contacted during the master planning process to identify proposed but not yet mobilized improvements to utility locations or new main installations in the broader North Long Beach Area. A map was transmitted covering the Redevelopment Project Area, along with a letter requesting information.

A copy of each utility's master plan for future improvements was requested, and the utilities were given the alternative option of providing a list with estimated dates of construction of improvements planned over the next 5 years, whichever was more convenient for them. A list of utilities serving North Long Beach, which were contacted during the Master Planning process, is provided in Table III-2. Follow-up contacts were made a number of times during the master planning process, and offers were made in each case to assist with copying or pickup of the requested information.

Two utilities responded with written information. Both the City of Long Beach Energy Department and the City of Long Beach Water Department submitted copies of their respective master plans, attached in Appendices O and P, respectively. A number of utilities also responded that there were no improvements planned. Those utilities are listed in Table III-3.

The information gathered was intended to be used to schedule improvements in the Street Enhancement Master Plan, such that street paving would be constructed after any excavations for utilities. It is recommended that the utility coordination process be repeated as soon as a list of paving projects is finalized for any given year.

## III. Infrastructure Improvements

**Table III-1. Infrastructure Improvement Cost Summary**

| <b>Infrastructure Improvements</b> | <b>Length</b> | <b>Direct Construction</b> | <b>Contingency<sup>1</sup></b> | <b>Design and Construction Management<sup>2</sup></b> | <b>Total</b>  |
|------------------------------------|---------------|----------------------------|--------------------------------|---|---------------|
| Pavement Restructuring             |               |                            |                                |   |               |
| Arterial Streets Restructuring     | 8.14 Miles    | \$3,749,905                | \$562,486                      | \$1,078,098   | \$5,390,489   |
| Local Streets Restructuring        | 91.50 Miles   | \$15,764,901               | \$2,364,735                    | \$4,532,409   | \$22,662,045  |
| Local Streets Reconstruction       | 1.23 Miles    | \$801,093                  | \$120,164                      | \$230,314   | \$1,151,571   |
| Dirt Alley Construction            | 2.45 Miles    | \$1,909,050                | \$286,358                      | \$658,622   | \$2,854,030   |
| Asphalt Alley Reconstruction       | 7.11 Miles    | \$4,635,670                | \$695,351                      | \$1,599,306   | \$6,930,327   |
| Concrete Alley Reconstruction      | 24.17 Miles   | \$890,447                  | \$133,567                      | \$307,204   | \$1,331,218   |
| Curb and Gutter Reconstruction     | 46.52 Miles   | \$6,140,501                | \$921,075                      | \$1,765,394   | \$8,826,970   |
| Sidewalk Reconstruction            | 616,499 SF    | \$3,082,495                | \$462,374                      | \$886,217   | \$4,431,086   |
| ADA Ramps                          | 2,100         | \$3,150,000                | \$472,500                      | \$905,625   | \$4,528,125   |
| Storm Drain Improvements           |               | \$45,000,000               | \$6,750,000                    | \$12,937,500  | \$64,687,500  |
| Total Estimated Cost:              |               | \$85,124,063               | \$12,768,609                   | \$24,900,690  | \$122,793,362 |

<sup>1</sup> 15% of Direct Construction

<sup>2</sup> 25% of Direct Construction + Contingency for all improvements, except alleys: 30% for alleys.

**Table III-2. Utility Companies Serving North Long Beach**

|   |   |  |  |
|---|---|--|--|
| THE GAS COMPANY<br>Distribution<br>1919 S. State College Blvd.<br>P. O. Box 3334<br>Anaheim, CA 92803-3334  | CITY OF LONG BEACH<br>GAS DEPARTMENT<br>2400 E. Spring Street<br>Long Beach, CA 90806                                 | THE GAS COMPANY<br>ML 8321<br>1919 S. State College Blvd.<br>Anaheim, CA 92806-6114                                | PIPELINE FOREMAN<br>Lomita Gasoline Company<br>P. O. Box 1330<br>Long Beach, CA 90802                          |
| THE GAS COMPANY<br>Transmission<br>P. O. Box 2300<br>Chatsworth, CA 91313-2300  | GENERAL TELEPHONE OF CALIFORNIA<br>7352 Slater Avenue<br>Huntington Beach, CA 92647                                   | CENTRAL BASIN MUNICIPAL WATER DISTRICT<br>17140 Avalon Boulevard<br>Carson, CA 90746-1296                          | METROPOLITAN WATER DISTRICT<br>Civil Engineering<br>700 N. Alameda Street<br>Los Angeles, CA 90012-2944        |
| AT&T COMMUNICATIONS<br>Gardena O.S.P.<br>17200 S. Vermont Ave.<br>Room B, 4th Floor<br>Gardena, CA 90247  | GENERAL TELEPHONE<br>7352 Slater Avenue<br>Huntington Beach, CA 92647   | BOEING AIRCRAFT<br>3855 Lakewood Blvd.<br>Mail Stop D-124-0010<br>Long Beach, CA 90846                             | MOBIL OIL CORPORATION<br>3700 W. 90th Street<br>Torrance, CA 90509-2929  |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>STREET DIVISION<br>1601 San Francisco Ave.<br>Long Beach, CA 90813                                  | SOUTHERN CALIFORNIA EDISON COMPANY<br>P. O. Box 2896<br>Long Beach, CA 90101  | AT&T OUTSIDE PLANT<br>Engineer and Right-of-Way<br>1st Street and Celico Blvd.<br>P. O. Box 240<br>Yermo, CA 92398 | PACIFIC BELL ENGINEERING OFFICE<br>100 W. Alondra Boulevard<br>Building A, Room 202<br>Gardena, CA 90248       |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>ELECTRICAL DIVISION<br>1601 San Francisco Ave.<br>Long Beach, CA 90813                              | SOUTHERN CALIFORNIA EDISON COMPANY<br>2800 E. Willow Street<br>Long Beach, CA 90806                                   | ARCO PRODUCTS COMPANY<br>5900 Cherry Avenue<br>Long Beach, CA 90805  | PACIFIC BELL<br>41 S. Chester, Room 202<br>Pasadena, CA 91106  |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>REFUSE DIVISION<br>1601 San Francisco Ave.<br>Long Beach, CA 90813                                  | LONG BEACH PUBLIC TRANSPORTATION<br>1300 Gardenia Avenue<br>Long Beach, CA 90813                                      | CHEVRON PIPELINE CO.<br>16301 Trojan Way<br>La Mirada, CA 90638  | CENCO REFINING COMPANY<br>12345 Lakeland Road<br>Santa Fe Springs, CA 90670-9883                               |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>LANDSCAPING DIVISION<br>Bureau of Public Service<br>1601 San Francisco Ave.<br>Long Beach, CA 90813 | SOUTHERN CALIFORNIA EDISON<br>2500 E. Victoria Street<br>Compton, CA 90220  | CHARTER COMMUNICATIONS<br>Construction Office<br>2931 Redondo Avenue<br>Long Beach, CA 90806                       | EQUILON PIPELINE COMPANY (Texco & Shell)<br>20945 Wilmington Avenue<br>Carson, CA 90810                        |
| CITY OF LONG BEACH<br>WATER DEPARTMENT<br>1800 E. Wardlow Road<br>Long Beach, CA 90807  | CITY LIGHT AND POWER<br>LONG BEACH, INC.<br>One World Trade Center, Suite 2400<br>Long Beach, CA 90831-2400           | GATX CORP (DOUGLAS OIL)<br>2000 E. Sepulveda Blvd.<br>Carson, CA 90810   | PACIFIC PIPELINE SYSTEM, INC.<br>5900 Cherry Avenue<br>Long Beach, CA 90805                                    |
|   | PUBLIC WORKS/ENGINEERING<br>Mapping Section<br>City Hall, 9th Floor<br>333 W. Ocean Boulevard<br>Long Beach, CA 90802 | GENERAL TELEPHONE NETWORK SERVICES<br>7352 Slater Avenue<br>Huntington Beach, CA 92647                             | THE GAS COMPANY<br>Distribution<br>1919 S. State College Boulevard<br>P. O. Box 3334<br>Anaheim, CA 92803-3334 |

**Table III-3. Utility Companies Responding with No Planned Improvements**

|   |   |   |
|---|---|---|
| THE GAS COMPANY<br>Transmission<br>P. O. Box 2300<br>Chatsworth, CA 91313-2300  | LONG BEACH PUBLIC<br>TRANSPORTATION<br>1300 Gardenia Avenue<br>Long Beach, CA 90813                                   | GATX CORP (DOUGLAS OIL)<br>2000 E. Sepulveda Boulevard<br>Carson, CA 90810                                  |
| AT&T COMMUNICATIONS<br>Gardena O.S.P.<br>17200 S. Vermont Ave, Room B,<br>4th Floor<br>Gardena, CA 90247                    | SOUTHERN CALIFORNIA EDISON<br>2500 E. Victoria Street<br>Compton, CA 90220  | GENERAL TELEPHONE NETWORK<br>SERVICES<br>7352 Slater Avenue<br>Huntington Beach, CA 92647                   |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>STREET DIVISION<br>1601 San Francisco Avenue<br>Long Beach, CA 90813      | CITY LIGHT AND POWER LONG<br>BEACH, INC.<br>One World Trade Center,<br>Suite 2400<br>Long Beach, CA 90831-2400        | PIPELINE FOREMAN<br>Lomita Gasoline Company<br>P. O. Box 1330<br>Long Beach, CA 90802                       |
| CITY OF LONG BEACH<br>Bureau of Public Service<br>REFUSE DIVISION<br>1601 San Francisco Avenue<br>Long Beach, CA 90813      | PUBLIC WORKS/ENGINEERING<br>Mapping Section<br>City Hall, 9th Floor<br>333 W. Ocean Boulevard<br>Long Beach, CA 90802 | METROPOLITAN WATER DISTRICT<br>Civil Engineering<br>700 N. Alameda Street<br>Los Angeles, CA 90012-2944     |
| CITY OF LONG BEACH<br>LANDSCAPING DIVISION<br>Bureau of Public Service<br>1601 San Francisco Avenue<br>Long Beach, CA 90813 | THE GAS COMPANY<br>ML 8321<br>1919 S. State College Blvd.<br>Anaheim, CA 92806-6114                                   | MOBIL OIL CORPORATION<br>3700 W. 90th Street<br>Torrance, CA 90509-2929                                     |
| GENERAL TELEPHONE OF<br>CALIFORNIA<br>7352 Slater Avenue<br>Huntington Beach, CA 92647                                      | BOEING AIRCRAFT<br>3855 Lakewood Blvd.<br>Mail Stop D-124-0010<br>Long Beach, CA 90846                                | PACIFIC BELL ENGINEERING<br>OFFICE<br>100 W. Alondra Boulevard<br>Building A, Room 202<br>Gardena, CA 90248 |
| GENERAL TELEPHONE<br>7352 Slater Avenue<br>Huntington Beach, CA 92647   | AT&T OUTSIDE PLANT<br>Engineer and Right-of-Way<br>1st Street and Celico Blvd.<br>P. O. Box 240<br>Yermo, CA 92398    | PACIFIC BELL<br>41 S. Chester, Room 202<br>Pasadena, CA 91106   |
| SOUTHERN CALIFORNIA<br>EDISON COMPANY<br>P. O. Box 2896<br>Long Beach, CA 90101   | ARCO PRODUCTS COMPANY<br>5900 Cherry Avenue<br>Long Beach, CA 90805   | CENCO REFINING COMPANY<br>12345 Lakeland Road<br>Santa Fe Springs, CA 90670-9883                            |
| SOUTHERN CALIFORNIA<br>EDISON COMPANY<br>2800 E. Willow Street<br>Long Beach, CA 90806                                      | CHEVRON PIPELINE COMPANY<br>16301 Trojan Way<br>La Mirada, CA 90638   | EQUILON PIPELINE COMPANY<br>(Texco & Shell)<br>20945 Wilmington Avenue<br>Carson, CA 90810                  |
|   | CHARTER COMMUNICATIONS<br>Construction Office<br>2931 Redondo Avenue<br>Long Beach, CA 90806                          | PACIFIC PIPELINE SYSTEM, INC.<br>5900 Cherry Avenue<br>Long Beach, CA 90805                                 |

#### IV. STREETSCAPE IMPROVEMENTS



## IV. STREETSCAPE IMPROVEMENTS

### A. Overview

Streetscape improvements are divided into two groups of priorities, based on input from the North Long Beach Strategic Guide Steering Committee and other community members. The first group includes improvements within the public right-of-way, which are considered necessary to improve the appearance of North Long Beach, enhance its identity as a livable and sustainable community, and reinforce the Strategic Guide. The first-priority improvements include traffic calming and pedestrian amenities, street trees, medians, and gateway enhancements. The second group includes improvements adjacent to the public right-of-way, which are also desirable. They include permanent pocket parks, temporary setback landscaping of vacant lots and back-up lot landscaping.

Figure IV-1 shows examples of the types of streetscape improvements proposed for North Long Beach. Figure IV-2 shows existing land uses along the major streets and in the neighborhoods that are served by them. Figure IV-3 shows the locations of proposed streetscape improvements in relation to Strategic Guide recommendations. Table IV-1 lists the improvements that are recommended for each major street. This section provides a summary of the streetscape improvements proposed for North Long Beach, including costs and priorities. Section V describes the improvements proposed for each street, as well as key background information and Bicycle Master Plan and Strategic Guide recommendations.

Community members identified the undergrounding of utility lines (electric, telephone and cable) as a high priority. However, recognizing the cost of undergrounding and the limited funds potentially available for streetscape improvements, utility undergrounding is not included as a priority element in this Master Plan. However, it is recommended that other funding be sought to underground utilities over time. The top priorities for such undergrounding are residential and commercial areas, followed by industrial areas. To some extent, street trees will help mitigate the visual blight of overhead utilities until they can be undergrounded.

Identity, wayfinding and directional signage were also identified as concerns. The Steering Committee has expressed interest in pursuing a comprehensive signage program for north Long Beach.

Similarly, open space and landscaping along the Los Angeles River, as well as improved access to the bicycle path along the river, while not along major streets and, therefore, not a part of this Master Plan, were of great interest to community members. Opportunities include play fields, pocket parks at access points to the river bicycle path and tree planting along the river. Funding from county, state and federal sources and assistance from tree groups, such as the Long Beach Conser-

vation Corps and the Tree People, and conservancies should be actively sought to provide open space along the river and elsewhere in North Long Beach.

Improving bicycle access throughout North Long Beach was also identified as an important concern. The Street Enhancement Master Plan relies on the recently completed Long Beach Bicycle Master Plan to guide the development and maintenance of bicycle-friendly roads, support facilities and programs. A key policy of the Bicycle Master Plan is that, "each time arterial and collector streets are resurfaced they should be re-stripped to add width to the curb lane without compromising safety; consider designating these streets with wide curb lanes as future Class III routes. In addition, designated Class II lanes can be added where there is enough width."

A Class III route "provides for shared use with pedestrian or motor vehicle traffic and is identified only by signing." A Class II lane "provides a striped lane for one-way travel on a street or highway." A Class II lane may be considered where a 5-foot wide bicycle lane can be accommodated adjacent to a 7 or 8-foot wide parking lane or where a 3 or 4-foot wide bicycle lane can be accommodated where there is not curb-side parking. Specific recommendations by the Bicycle Master Plan for major streets in North Long Beach are described in the Background discussion of each street in Section VI.

### B. First-Priority Streetscape Improvements

#### I. Traffic Calming and Pedestrian Amenities

Traffic calming and pedestrian amenities should be provided in designated village centers and neighborhood commercial nodes, as well as along streets adjacent to new multi-family and mixed use developments. Recommended improvements in these areas include corner curb extensions, enhanced paving of crosswalks and pedestrian-activated signals at mid-block crossings to make it easier for pedestrians to cross the street and to make them more visible to motorists. Other recommended improvements include wider sidewalks in locations where the existing sidewalks are less than 10 feet wide, pedestrian-scale street lights, bus shelters, benches and chairs, and trash receptacles, as well as color schemes for furnishings and lighting. Because all roadway light poles, except those at signalized intersections, are concrete, the roadway light poles cannot be painted and are not included in the furnishing color schemes.

Some pedestrian amenities are proposed to be the same for the entire North Long Beach community. Others should vary from street to street. To provide continuity and ease of maintenance, a typical curb extension and crosswalk design should be used throughout North Long Beach. Similarly, the same style of bus shelters, benches and chairs and trash receptacles should be used throughout North Long Beach, with colors varying from street to street. The recommended areawide

**Figure IV-1. Streetscape Improvement Examples**

**Traffic calming and pedestrian amenities:**

**Pedestrian street lights** illuminate the sidewalk and add visual interest.



**Corner curb extensions and crosswalks** make it easier for pedestrians to cross the street.



**Seating** makes waiting for the bus more comfortable.



**Street furniture** provides essential services.



**Amenities** encourage activity and enliven the street.



**Street trees** can change the look of the street, provide shade, screen power lines, and increase property values.



**Landscaped medians** include trees and groundcover.



**Landscaped setbacks** can improve vacant lots and SCE ROW.



**Pocket parks** can be created from small lots, corners of shopping malls and unused right-of-way.



**Gateways** from the freeways and on major streets may include landscaping, lighting, signs and public art.

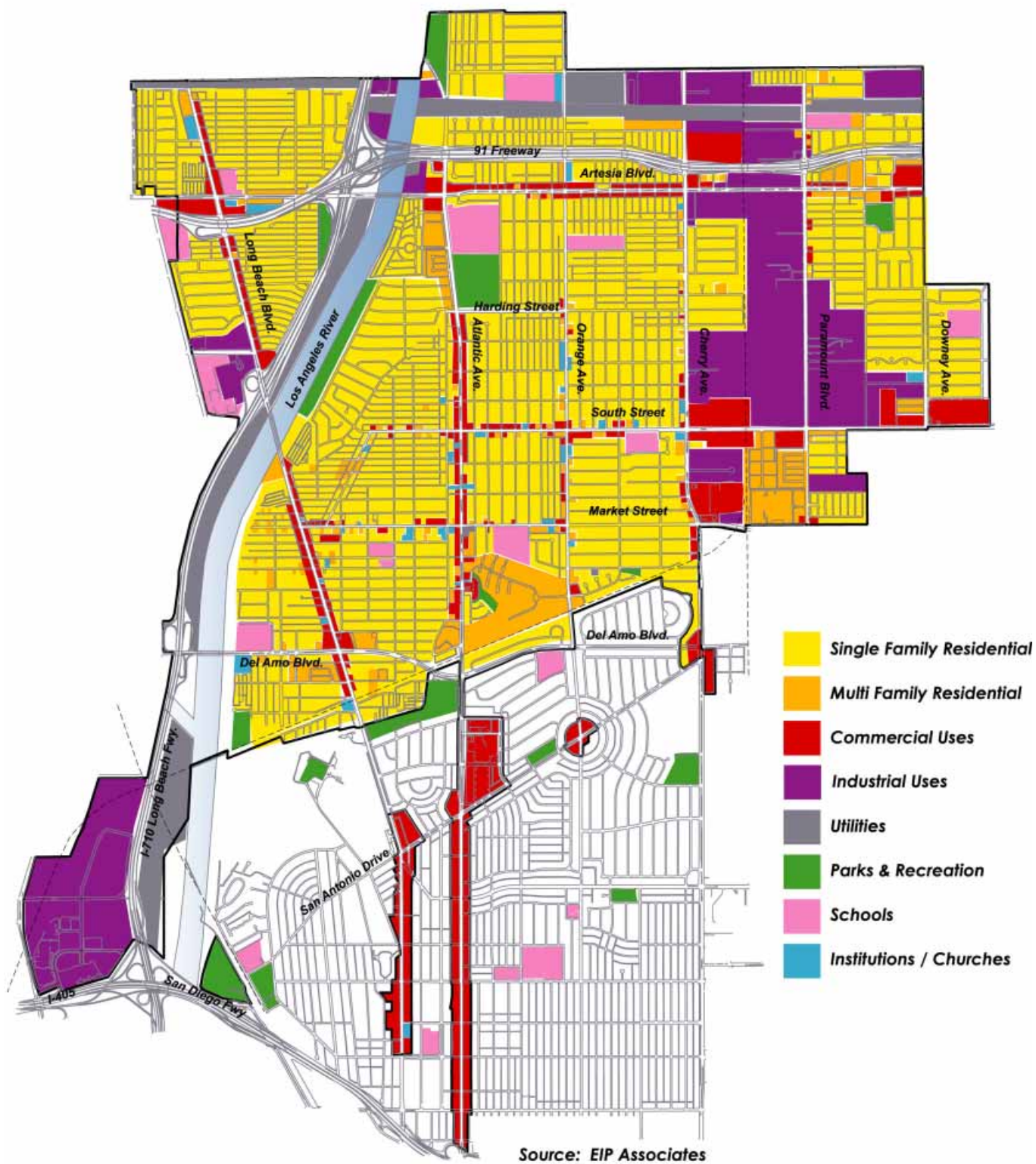


**Public art** can be integrated into all improvements.





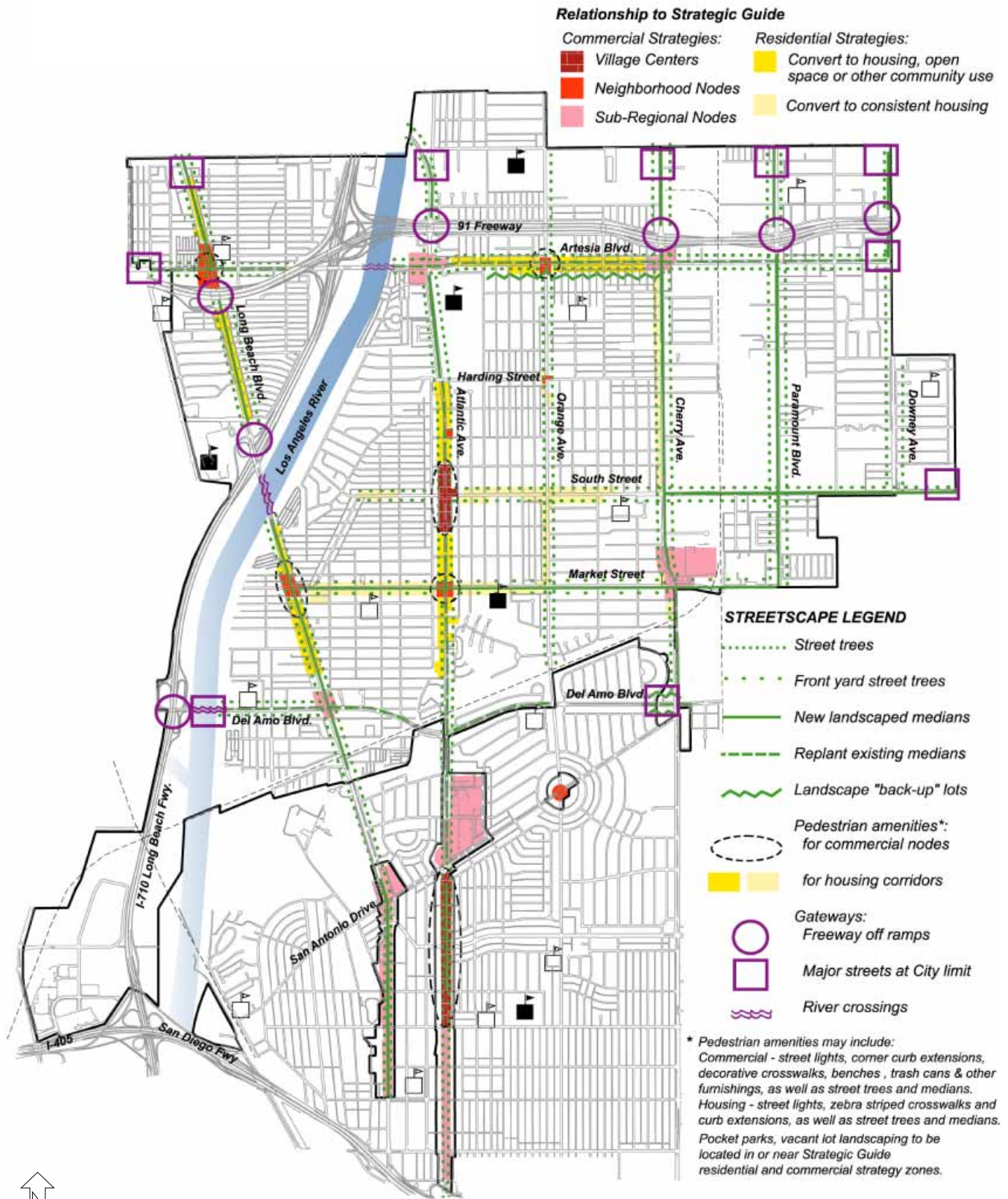
Figure IV-2. Existing Land Uses



1" = 3,200'



**Figure IV-3. Proposed Streetscape Improvements in Relation to North Long Beach Strategic Guide**



↑  
1" = 3,200'



North Long Beach furnishings include:

- At bus shelters, the 2-post, off-set canopy model of the Kaleidoscope canopy system with either leaning rails or Presidio seating with backs and arms, manufactured by Landscape Forms, is recommended. Because this shelter is supported by only 2 posts, it can be accommodated on narrow (10-foot wide) sidewalks. The shelters may be located within the parkway zone, in the setback along the property line or even in a hardscape area in the front yard setback of an adjacent development site. Shelters may be installed through a public improvement program or required as a condition of approval of larger-scale corner development projects.



*Proposed bus shelter.*

- The recommended benches and chairs, in the same family as the bus benches, are Landscape Forms' Presidio Collection, either surface-mounted or embedded (not freestanding), which can be combined in a variety of ways: with or without backs, with or without arms, in groups of 2, 3, 4 or 5 seats (4 feet to 10 feet long).



- Toter trash receptacles, which can be automatically emptied by the City's trash trucks, like those used in Bixby Knolls should be used throughout North Long Beach

and, in particular, at bus stops, in commercial areas, and near schools and other community facilities. The trash receptacles should be emptied and cleaned on a regular basis by the City. For pedestrian commercial areas or where the property owner or tenant agrees to maintain it or at bus stops with shelters, the Saturn I trash receptacle with weather guard cap, manufactured by Ironsmith, is recommended.



*Proposed trash receptacles*

- Pedestrian-scale street lights will be provided where higher volumes of pedestrian activity are anticipated or encouraged, including bus stops, village centers and neighborhood nodes, and where new residential development with front yards facing onto the street is proposed by the Strategic Guide. Pedestrian-scale street lights are ornamental lights that supplement the existing roadway lights by providing additional down-lighting of the sidewalk. Unless otherwise specified, pedestrian street lights should be on 12-foot tall ornamental poles and use relatively low wattage lamps (less than 100 MW) in a Type V cut-off reflector or louver system to reduce glare for motorists.

The recommended pedestrian street light and street furnishing color scheme for each street, specific locations of curb extensions and enhanced crosswalks, and other street- or site-specific amenities, which will vary from street to street, are described in Section V for each street. The specifications for the above furnishings are included in Tables IV-2 and IV-3.



*Proposed pedestrian street lights.*

#### IV. Streetscape Improvements

IV-5



The pedestrian-oriented commercial areas identified by the Strategic Guide, where traffic calming and pedestrian amenities should be provided, are:

#### ***Pedestrian-oriented Village Centers***

1. The North Village Center – Atlantic Avenue from 56<sup>th</sup> to 59<sup>th</sup> Streets
2. Bixby Knolls Village Center – Atlantic Avenue from San Antonio Drive to Bixby Road

#### ***Neighborhood/Convenience Commercial Nodes***

3. Long Beach Boulevard and Market Street
4. Long Beach Boulevard and Artesia Boulevard
5. Atlantic Avenue and Market Street
6. Orange Avenue at Artesia Boulevard

Traffic calming and pedestrian improvements should be installed in conjunction with new mixed use and housing sites when they are developed.

## **2. Street Trees**

Street trees should be planted along all 10 major streets where sidewalks are wide enough to accommodate them. With the exception of Atlantic Avenue between 61st Street and Del Amo Boulevard, where the sidewalks are 6.5 feet wide, and Market Street and Del Amo Boulevard, which have 5-foot wide sidewalks, all the arterials have sidewalks that are wide enough to accommodate street trees. Most of these sidewalks are at least 10 feet wide, with 12- to 15-foot-wide sidewalks in some locations.

Along street segments with existing residential, industrial or commercial uses that are setback from the sidewalk with either landscaping or parking in the front yard setbacks, or along street segments designated by the Strategic Guide for conversion to such uses, street trees should be planted in continuous parkways. The inside 4 to 5 feet of the sidewalk should be devoted to a walkway, while the remainder of the sidewalk width along the curb should be a continuous parkway for street trees and future landscaping by the adjacent property owner. Since many segments are being converted from commercial to residential, creation of the parkway strip will require sawcutting of the existing sidewalk.

At bus stops and along street segments designated by the Strategic Guide as village centers or neighborhood nodes, where high volumes of pedestrian activity are anticipated, street trees should be planted in large tree wells: 4-foot x 8-foot wells without grates and covered with 3 inches of mulch or 6-foot square wells with grates.

Where medians are being installed, the median irrigation should be extended to include the parkways. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. Otherwise, the City will need to water the trees with a minimum of 20 gallons per tree per week for the first 3 to 5 years (3 year minimum for trees in parkways and 5 year minimum for trees in tree wells) using a water truck.



*Street trees can transform a street.*

Initially, parkways and tree well surfaces should be covered with 3" of mulch. The mulch should be replenished and weeded as needed. When new development occurs or a discretionary approval for an existing development is granted, developers should be required to provide irrigation and landscaping of the parkways (turf, ornamental grasses or low-growing groundcover) to supplement the street trees and will be held responsible for maintaining the landscaping. The City will be responsible for tree pruning.

Street trees should be planted an average of 25 feet on center, standard in form (a single trunk), and a minimum of 15-gallon in size. Larger sizes (24 or 36-inch boxes) are preferred because they are more likely to survive the difficult conditions along major streets. Trees should be double staked with lodgepoles or galvanized poles and non-wire ties. The stakes and ties must be removed once the tree is able to stand on its own and to withstand vandalism. The approximate locations of street trees on all arterial streets are shown in Appendix S. Proposed street and median tree species are listed in Table IV-4. All proposed street trees are on the City's approved street tree list.



### 3. Medians

On existing raised medians on Atlantic Avenue, Artesia Boulevard and Del Amo Boulevard, paved areas should be removed and replaced with landscaping. The existing raised, unlandscaped medians on Cherry Avenue and South Street near the rail crossing should be landscaped. Where feasible, new raised, landscaped medians should be provided along the other arterials. The approximate locations of possible medians are shown in Appendix S. Table IV-4 lists recommended trees for medians to complement the recommended street trees. The following street segments are too narrow to accommodate medians: Orange Avenue, South Street west of Cherry Avenue, and Downey Avenue between the Artesia Freeway and Poppy Avenue. A traffic study should be prepared prior to the design of any median. Medians should be graded to create a central swale along the length of the median to reduce runoff from irrigation and stormwater.

### 4. Enhanced Gateway Landscaping

Many Steering Committee and community members expressed concern about the appearance of the major corridors at entries to the city and the first impression that such an appearance gives to visitors and residents alike. To address this concern, typical street tree and median landscaping should be enhanced at the gateways by additional landscaping in the medians and parkways and, for gateways at the north, landscaping of the street edges of Southern California Edison rights-of-way. Gateway landscaping should include several common elements that will be used at all gateways in conjunction with the individual landscape palette for each street. The common elements at each gateway may include 3 to 6 Canary Island Palms or Mexican Date Palms with clusters of Flax or other drought-tolerant subtropical plants in conjunction with gateway sign, and up-lighting of trees and signs. Where there are medians at the gateways, these elements should be located in the medians. Where medians are not feasible, the supplemental landscaping should be provided in the parkways.



*Attractive gateways provide a positive introduction to the City.*

## C. Second-Priority Streetscape Improvements

### I. Permanent Pocket Parks

There is a shortage of open space of all types in North Long Beach. While large areas are needed to provide play fields, several lots can provide a neighborhood park with play equipment for small children, seating, and small lawn areas. Pocket parks are best located adjacent to and in conjunction with housing or other community facilities, such as a library or a school. They can also be successful adjacent to restaurants or coffee shops. They can even attract new business, for example, the Starbucks located next to the City-funded pocket park on Paramount Boulevard in the City of Paramount. Pocket parks directly adjacent to a non-profit corporation housing development can be maintained, supervised and programmed by the non-profit corporation. This model has been successfully employed by the Los Angeles Community Redevelopment Agency.

The Strategic Guide recommends that parks be developed to provide open space in existing, dense residential areas.



*Pocket parks provide play areas for neighborhood families.*

Pocket parks are currently planned at Market Street and Dairy Avenue and at Plymouth Street and Elm Avenue. Others should be considered at the following locations:

1. The proposed North Long Beach branch library
2. The North Long Beach Village Center or adjacent residential development along Atlantic Avenue
3. Elementary or middle schools
4. Day care facilities
5. Non-profit corporation housing developments; and
6. Housing or commercial development projects where the developer agrees to maintain the pocket park.

### 2. Temporary Vacant Lot Landscaping

The front yard setbacks of parcels that are acquired by the City for future development should be landscaped in a simple way until they are developed to provide benefit to the area..



In addition, other long-vacant parcels should be similarly landscaped if the owners agree to allow the City to install and maintain the landscaping.

The City of Paramount provides a model for how a modest amount of landscaping can transform the front setback of a derelict lot into a community amenity. Temporarily landscaped lots also provide the opportunity for temporary art installations that add interest and attract people to the area.

Priority locations for temporary vacant lot landscaping are:

1. Any parcel acquired by the City for future development;
2. Atlantic Avenue between Harding Street and Market Street;
3. Long Beach Boulevard north of Del Amo Boulevard;
4. Artesia Boulevard between Atlantic Avenue and Cherry Avenue;
5. South Street between Atlantic Avenue and Cherry Avenue; and
6. Market Street between Long Beach Boulevard and Atlantic Avenue.

### 3. Back-up Lot Landscaping

When rear yards of homes front along arterials in North Long Beach, there is typically a wall on the property line and several feet of unpaved public right-of-way between the wall and the sidewalk. There is no consistent wall design or landscaping in these “back-up” lot conditions.



Typical existing back-up lot condition.

Where feasible and appropriate to the housing design concept, new development should provide side yards rather than rear yards along the major arterial street, as recommended by the Strategic Guide, along sections of Artesia Boulevard. This orientation eliminates the need for a continuous tall blank wall along a major arterial, which is both visually uninteresting and likely to require removal of graffiti on a regular basis. If unavoidable, new development projects may be designed with rear yards facing the major arterial. In either case, the setback between the sidewalk of the major arterial and the yards of the new homes should be designed to include the following:

1. A minimum 10-foot common landscaped setback should be provided between the sidewalk and the yards of individual homes.
2. A wall up to 8 feet in height should be provided adjacent to the rear yard, and a wall or hedge up to 5 feet may be provided adjacent to the side yard parallel to the house at the 10-foot setback line to provide privacy, with no wall within the front yard setback. A low hedge (3 feet tall maximum) may be provided adjacent to the front yard. Along the major arterial, any wall or hedge should be set back from the property line at least 10 feet, with landscaping between it and the sidewalk.
3. Walls should be constructed of a permanent material such as concrete masonry units and planted with Creeping Fig (*Ficus repens*) or other vine that will provide close to 100% coverage of the wall surface within 5 years of planting.
4. The landscaped setback between the wall and sidewalk must be irrigated and should include trees at an average spacing of not more than 25 feet and landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials such as rocks. The landscaping must be irrigated with an automatic system and be designed to provide 100% coverage within 3 years of planting.

Where a back-up lot condition already exists, the following should be provided:

1. A continuous wall up to 8 feet tall of a permanent material such as concrete masonry units.
2. Planting at the base of the wall of Creeping Fig (*Ficus repens*) or other vine that will provide close to 100% coverage of the wall surface within 5 years of planting.
3. Landscaping of the setback between the wall and sidewalk, consisting primarily of plant materials and secondarily of hardscape materials such as rocks. Landscaping must be irrigated with an automatic system and must be designed to provide 100% coverage within 3 years of planting.

### D. Complementary Improvements on Adjacent Parcels

The following improvements, while not within the scope of the Street Enhancement Master plan, are suggested in response to concerns raised by community members. These suggestions may be implemented by the City in its site selection and design process for public facilities and by private property owners and developers either voluntarily or as a result of changes to the Zoning Code.



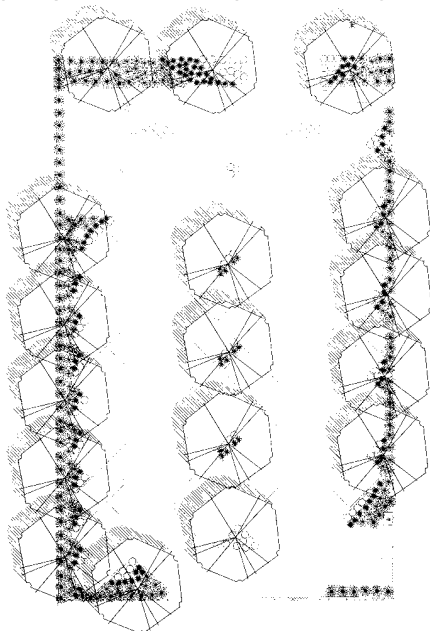
## I. Clustering of Community Facilities

There is a shortage of parks and other community facilities in North Long Beach, as noted by community members and discussed in the Strategic Guide. It is recommended that pocket parks and other community facilities, including a library, schools, day care facilities and social services, be clustered with neighborhood-serving commercial centers to provide gathering places for social activity within the community and to create a synergy between commercial uses and community facilities.

Since the majority of properties fronting the 10 arterials will remain or be converted to residential, commercial or open space uses, they would have front yard setbacks between the sidewalk and buildings or parking lots. Those front yard setbacks, except for pedestrian paths, should be landscaped, including canopy trees at an average spacing of not more than 25 feet on center. Trees on private property should be aligned with street trees and be of the same variety and form to provide a parallel double row of trees where possible.

## 2. Parking Lot Landscaping

Parking lots that front on arterials should include a 10-foot-wide landscaped setback along the arterials and 5-foot-wide setbacks on other streets, with canopy trees at an average spacing of not more than 25 feet on center. Within the parking lot, trees should be planted to provide 50% canopy coverage of the parking lot surface within 10 years. One 24-inch box tree of a species that has a mature height and spread of at least 30 feet at every third parking stall in a continuous planting area or in a tree well at least 36 square feet in size will typically achieve the required coverage.



*Illustrative parking lot landscaping.*

## IV. Streetscape Improvements

IV-9

All the landscaped areas described above must be irrigated and must include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials such as rocks. The landscaping should be irrigated with an automatic irrigation system and must be designed to provide 100% coverage within 3 years of planting.

## E. Street Priorities

The North Long Beach Strategic Guide Steering Committee and community members identified their priorities with respect to the order in which the 10 arterial streets should be improved with streetscape elements.

Regardless of the priorities described below, if an arterial street's pavement and/or sidewalk curb and gutter are scheduled for improvement, then the medians and street trees, as well as any proposed curb extensions, should be installed at the same time to minimize disruption to businesses and residences along the street.

### I. First-Priority Streets

First priority should be given to arterials along which the Strategic Guide proposes commercial and residential use strategies and, in particular, to those segments along which the strategies are proposed. There are 27 miles of arterials in North Long Beach. The Strategic Guide focuses its commercial and residential use strategies on about 37% of that total along the following streets: Atlantic Avenue, Long Beach Boulevard, Artesia Boulevard, South Street and Market Street. In addition, it identifies industrial use strategies along Paramount Boulevard.

**Atlantic Avenue and Long Beach Boulevard.** Atlantic Avenue and Long Beach Boulevard are rated the most important streets. Pedestrian amenities in the Village on Atlantic Avenue at South Street and in the Old Virginia City area on Long Beach Boulevard at Market Street are the highest priorities. Street trees and landscaped medians along the entire length of both streets and enhanced gateway landscaping, lighting and signage north of Artesia Boulevard are also high priorities.

**Artesia Boulevard, Cherry Avenue and South Street.** Artesia Boulevard and Cherry Avenue are the next priorities. Key improvements on Artesia Boulevard include enhancing the existing medians by removing existing pavement and replacing it with plant materials; planting street trees; enhancing the gateways at the City limits with additional landscaping, lighting and signage; and back-up lot landscaping in conjunction with new housing.

Key improvements on Cherry Avenue include landscaping the existing median; planting street trees; installing new land-



scaped medians; enhancing the gateway north of Artesia Boulevard with additional landscaping, lighting and signage; and back-up lot landscaping in conjunction with new housing.

**South Street and Market Street.** Key improvements on South Street include street trees; landscaped medians; and pedestrian amenities. Key improvements on Market Street include street trees in conjunction with new development and front yard trees for existing housing where existing sidewalks are too narrow for street trees; and pedestrian amenities between Long Beach Boulevard and Atlantic Avenue.

## **2. Second Priority Streets**

Key improvements on Orange Avenue include additional street trees to provide a consistent tree canopy on both sides of the street. Del Amo Boulevard improvements include refurbishing the existing medians and providing consistent back-up lot landscaping. Paramount Boulevard and Downey Avenue improvements include street trees, medians and enhanced gateway landscaping north of Artesia Boulevard.

## **F. Cost of All Recommended Streetscape Improvements**

The total cost of the streetscape improvement needs is estimated to be in the range of \$31 million, including design and construction management costs and the initial watering of street trees for 3 years. Table IV-5 provides a summary of the costs of all streetscape improvements by street and by type

of improvement. Table IV-6 shows the costs of first-priority improvements by street.

Landscape improvements (medians, street trees, vacant lot/SCE setbacks and pocket parks) would require additional maintenance costs, totaling an estimated \$698,000 per year for all identified improvements, over half of which would be for the maintenance of landscaped medians.

For medians, maintenance costs include irrigation repairs and adjustments, trash pick-up, pruning, plant replacement and mowing of any turf. For street trees, maintenance costs include tree pruning.

## **G. Maintenance Funding Options**

Potential funding sources for maintenance of streetscape improvements, particularly medians, include:

- ☐ City General Fund.
- ☐ Citywide or area specific street maintenance assessment district, which would require approval by a majority of property owners.
- ☐ Business improvement districts.
- ☐ Adopt-a-median program modeled after the Caltrans program for freeway maintenance. Businesses, organizations and individuals would fund the maintenance effort and an acknowledgment sign would be posted along the street.

**Table VI-1. Proposed Streetscape Improvements by Street**

|  | <b>Long<br/>Beach<br/>Blvd.</b> | <b>Atlantic<br/>Ave.</b> | <b>Orange<br/>Ave.</b> | <b>Cherry<br/>Ave.</b> | <b>Para-<br/>mount<br/>Blvd.</b> | <b>Downey<br/>Ave.</b> | <b>Artesia<br/>Blvd.</b> | <b>South<br/>St.</b> | <b>Market<br/>St.</b> | <b>Del<br/>Amo<br/>Blvd.</b> |
|--|---------------------------------|--------------------------|------------------------|------------------------|----------------------------------|------------------------|--------------------------|----------------------|-----------------------|------------------------------|
| <i>Length of street (miles)</i>            | 4.4                             | 4.5                      | 2.6                    | 2.4                    | 1.9                              | 1.5                    | 3.3                      | 2.6                  | 2.3                   | 1.7                          |
| <i>Pedestrian improvements<sup>1</sup></i> | ✓                               | ✓                        | ✓                      | ✓                      | ✓                                | ✓                      | ✓                        | ✓                    | ✓                     | ✓                            |
| <i>Street trees<sup>2</sup></i>            | ✓                               | ✓                        | ✓                      | ✓                      | ✓                                | ✓                      | ✓                        | ✓                    | ✓ <sup>3</sup>        |                              |
| <i>Landscaped medians</i>                  |                                 |                          |                        |                        |                                  |                        |                          |                      |                       |                              |
| New  | ✓                               |                          |                        | ✓                      | ✓                                |                        |                          | ✓                    |                       |                              |
| Refurbished existing                       |                                 | ✓                        |                        | ✓                      |                                  |                        | ✓                        |                      |                       | ✓                            |
| <i>Gateway enhancements</i>                | ✓                               | ✓                        |                        | ✓                      | ✓                                |                        | ✓                        | ✓                    | ✓                     | ✓                            |
| <i>Pocket parks</i>                        |                                 |                          |                        |                        |                                  |                        |                          |                      |                       |                              |
| <i>Vacant lot setback landscaping</i>      | ✓                               | ✓                        | ✓                      | ✓                      | ✓                                | ✓                      |                          | ✓                    | ✓                     |                              |
| <i>Back-up lot landscaping</i>             |                                 |                          |                        | ✓                      |                                  |                        | ✓                        |                      |                       | ✓                            |
| <i>Underground utilities<sup>4</sup></i>   | NA                              | NA                       | ✓                      | ✓                      | ✓                                | ✓                      | ✓                        | ✓                    | ✓                     | ✓                            |

<sup>1</sup> These include street lights, enhanced crosswalks, widened sidewalks, and furnishings at bus stops and in pedestrian-oriented districts.

<sup>2</sup> Street trees to be planted in parkways, except at bus stops and adjacent to storefronts (0-setback buildings with sidewalk access). Irrigation to be added by property owner in conjunction with next discretionary approval (e.g., building permit, zone change, CUP), with 3-5 years of watering by water truck in the interim.

<sup>3</sup> Trees to be planted in front yards of existing and new development projects.

<sup>4</sup> Add to SCE undergrounding program.

**Table IV-2. Pedestrian Street Lights by Street**

| <b>Street</b>        | <b>Manufacturer</b> | <b>Model</b> | <b>Pole</b>              | <b>Shielding</b>             |
|----------------------|---------------------|--------------|--------------------------|------------------------------|
| Long Beach Boulevard | Selux               | Ritorno or   | Ritorno                  | none required                |
|                      | Selux               | Cosmo        | straight                 | Type V cut-off silver louver |
| Atlantic Avenue      | Lumec               | L80          | R30 or 40                | Type V SE refractor          |
| Residential Streets* | Selux               | Saturn I     | straight with base cover | Type V cut-off silver louver |
| Other Streets**      | Selux               | Quadro I     | straight                 | Type V cut-off silver louver |

\* Orange Avenue, Downey Avenue, South Street, Market Street

\*\* Cherry Avenue, Paramount Boulevard, Artesia Boulevard, Del Amo Boulevard

**Table IV-3. Pedestrian Street Light and Furnishing Colors by Street**

| <b>Street</b>            | <b>Color</b>                      | <b>RAL #</b> |
|--------------------------|-----------------------------------|--------------|
| Long Beach Boulevard     |                                   |              |
| Pedestrian street lights | Brushed aluminum or metallic gray | 9006         |
| Other furnishings        | Dark burgundy                     | 3007         |
| Atlantic Avenue          | Dark blue                         | 5011         |
| Orange Avenue            | Dark green                        | 6009         |
| Cherry Avenue            | Dark burgundy                     | 3007         |
| Paramount Boulevard      | Bronze                            | 6014         |
| Downey Avenue            | Dark green                        | 6009         |
| Artesia Boulevard        | Black                             | 9005         |
| South Street             | Dark green                        | 6009         |
| Market Street            | Dark green                        | 6009         |
| Del Amo Boulevard        | Bronze                            | 6014         |



**Table IV-4. Street Trees for Major Boulevards**

|                             | Sidewalks  |                                    | Medians  |  |
|-----------------------------|--|------------------------------------|--|--|
|                             | Botanical Name   | Common Name                        | Botanical Name   | Common Name                                  |
| <b>North-South Streets</b>  |  |                                    |  |  |
| <b>Long Beach Boulevard</b> |  |                                    |  |  |
| North of River              | <i>Koelreuteria bipinnata</i>  | Chinese Flame                      | <i>Jacaranda mimosifolia</i>                                       | Jacaranda                                    |
| South of River              | <i>Platanus mexicana</i> or  | Mexican Sycamore                   | <i>Jacaranda mimosifolia</i>                                       | Jacaranda                                    |
| <b>Atlantic Avenue</b>      |  |                                    |  |  |
| North of the Railroad       | <i>Ginkgo biloba</i>   | Ginkgo                             | <i>Eucalyptus*/Chorisia speciosa*</i>                              | Eucalyptus/Floss Silk                        |
| South of the Railroad       | <i>Washingtonia filifera*</i> &<br><i>Pyrus calleryana</i> 'Bradford'* | Mexican Fan Palm/<br>Bradford Pear | <i>Podocarpus gracilior*</i>                                       | Fern Pine                                    |
| <b>Orange Avenue</b>        |  |                                    |  |  |
| <b>Cherry Avenue</b>        |  |                                    |  |  |
|                             | <i>Jacaranda mimosifolia*</i>  | Jacaranda                          | NA   |  |
|                             | <i>Koelreuteria bipinnata</i>  | Chinese Flame                      | <i>Washingtonia filifera*/</i><br><i>Koelreuteria bipinnata</i>    | Mexican Fan Palm/<br>Chinese Flame           |
| <b>Paramount Boulevard</b>  |  |                                    |  |  |
|                             | <i>Tristania conferta</i>  | Brisbane Box                       | <i>Lagerstroemia indica x fauriei/</i><br><i>Pinus canariensis</i> | Japanese Crape Myrtle/<br>Canary Island Pine |
| <b>Downey Avenue</b>        |  |                                    |  |  |
| South of Poppy              | <i>Tipuana tipu*</i>   | Tipu                               | NA   |  |
| North of Poppy              | <i>Tristania conferta</i>  | Brisbane Box                       | NA   |  |
| <b>East-West Streets</b>    |  |                                    |  |  |
| <b>Artesia Boulevard</b>    |  |                                    |  |  |
| Storefront commercial       | <i>Ginkgo biloba</i>   | Ginkgo                             | <i>Eucalyptus*/Platanus* species</i>                               | Eucalyptus                                   |
| Other locations             | <i>Tabebuia ipe</i> ( <i>T. avellanedae</i> )                          | Ipe                                | <i>Eucalyptus*/Platanus* species</i>                               | Eucalyptus                                   |
| <b>South Street</b>         |  |                                    |  |  |
| <b>Market Street</b>        |  |                                    |  |  |
|                             | <i>Platanus acerifolia</i> 'Columbia'                                  | London Plane                       | <i>Platanus acerifolia</i> 'Columbia'                              | London Plane                                 |
|                             | <i>Lagerstromia indica x fauriei</i><br>'Muskogee' (in front yards)    | Japanese Crape Myrtle              | <i>Ginkgo biloba</i>   | Ginkgo                                       |
| <b>Del Amo Boulevard</b>    |  |                                    |  |  |
|                             | <i>Magnolia grandiflora</i>  | Southern Magnolia                  | Infill with existing species                                       |  |

\* Existing street tree

**Table IV-5. Summary of Estimated Streetscape Improvement Costs (in Thousands of 2002 Dollars (\$1,000s))**

Total capital costs are estimated to be \$30,850,000; total annual maintenance costs are estimated to be \$698,000.

|   | Long<br>Beach<br>Blvd. | At-<br>lantic<br>Ave. | Orange<br>Ave. | Cherry<br>Ave. | Para-<br>mount<br>Blvd. | Downey<br>Ave. | Artesia<br>Blvd. | South<br>St. | Market<br>St. | Del<br>Amo<br>Blvd. | Totals        |
|---|------------------------|-----------------------|----------------|----------------|-------------------------|----------------|------------------|--------------|---------------|---------------------|---------------|
| <b>Capital Costs<sup>1</sup></b>        |                        |                       |                |                |                         |                |                  |              |               |                     |               |
| Gateway Landscaping, Signs,             |                        |                       |                |                |                         |                |                  |              |               |                     |               |
| Lighting                                | 669                    | 422                   | 0              | 537            | 549                     | 379            | 393              | 358          | 0             | 308                 | 3,615         |
| Other Medians                           | 2,178                  | 2,001                 | 0              | 748            | 1,342                   | 56             | 434              | 997          | 1,145         | 430                 | 9,331         |
| Other Street Trees                      | 907                    | 580                   | 340            | 531            | 389                     | 278            | 768              | 669          | 258           | 0                   | 4,720         |
| Tree Grates                             | 310                    | 594                   | 0              | 21             | 17                      | 0              | 0                | 46           | 0             | 0                   | 988           |
| Bus Stop Improvements                   | 450                    | 450                   | 250            | 250            | 0                       | 150            | 300              | 200          | 0             | 100                 | 2,150         |
| Other Pedestrian Amenities <sup>2</sup> | 1,895                  | 1,893                 | 350            | 400            | 100                     | 288            | 400              | 640          | 971           | 150                 | 7,087         |
| Other Landscaping <sup>3</sup>          | 280                    | 280                   | 235            | 311            | 280                     | 235            | 235              | 235          | 235           | 360                 | 2,686         |
| Percent for Art                         | 62                     | 57                    | 9              | 25             | 27                      | 12             | 18               | 29           | 26            | 8                   | 273           |
| Total Cost                              | 6,751                  | 6,227                 | 1,184          | 2,873          | 2,704                   | 1,398          | 2,548            | 3,174        | 2,635         | 1,356               | <b>30,850</b> |
| <b>Annual Maintenance Costs</b>         |                        |                       |                |                |                         |                |                  |              |               |                     |               |
| Medians                                 | 72                     | 69                    | 0              | 36             | 46                      | 10             | 45               | 34           | 36            | 58                  | 406           |
| Street trees                            | 39                     | 24                    | 14             | 21             | 17                      | 13             | 29               | 23           | 20            | 2                   | 202           |
| Pocket Parks                            | 6                      | 6                     | 6              | 6              | 6                       | 6              | 6                | 6            | 6             | 6                   | 60            |
| Vacant Lot Landscaping                  | 3                      | 3                     | 3              | 3              | 3                       | 3              | 3                | 3            | 3             | 3                   | 30            |
| Total Cost Per Year                     | 120                    | 102                   | 23             | 66             | 72                      | 32             | 83               | 66           | 65            | 69                  | <b>698</b>    |

<sup>1</sup> Includes direct construction, contingency, design and construction inspection.

<sup>2</sup> Pedestrian amenities include corner curb extensions, decorative crosswalks, pedestrian street lights and furnishings.

<sup>3</sup> Other landscaping includes gateway enhancements, pocket parks (excludes acquisition), vacant lot setbacks and back-up lot landscaping.



**Table IV-6. First-Priority Improvements by Street**

It is assumed that pedestrian improvements at bus stops will be provided by Long Beach Transit Authority (LBTA).

**Street trees** should be planted an average of 25 feet apart in parkways, except at bus stops and in village centers and neighborhood nodes, where 4' x 8' tree wells should be used. Weekly irrigation by water truck for 3 years is included in the capital cost

**Landscaped medians** are new medians with trees, groundcover and irrigation.

**Refurbished medians** include removing paving, repairing irrigation and planting the entire median except along left-turn lanes.

**Costs** include direct construction, contingency, design and construction inspection.

| Street                      | Improvement   | Capital Cost (2002\$): |              |
|-----------------------------|---|------------------------|--------------|
|                             |   | Improvement            | Street       |
| Atlantic Ave.<br>4.5 mi.    | Pedestrian amenities at North Village Center (widened sidewalks, decorative crosswalks, pedestrian-scale street lights, trees, furnishings) | \$1,387,500            |              |
|                             | Gateway medians, street trees, sign & lighting - Atlantic Pl. to Artesia Blvd. (0.44 mi.)   | \$422,363              |              |
|                             | Pedestrian amenities at 18 bus stops (an average of 2 every 1/2 mile)   | \$450,000              |              |
|                             | Street trees along the rest of the street (with cast iron grates on 15% of the street)  | \$1,173,646            |              |
|                             | Refurbished existing medians; install new medians   | \$2,000,577            | \$5,434,086  |
| Long Beach Blvd.<br>4.4 mi. | Pedestrian improvements at Market St. center (corner curb extensions, pedestrian lights, trees, furnishings)                                | \$647,188              |              |
|                             | Gateway medians, street trees, sign & lighting - Greenleaf Blvd. to so. of 91 Fwy. (0.74 mi.)   | \$668,679              |              |
|                             | Pedestrian amenities at 18 bus stops (an average of 2 every 1/2 mile)   | \$450,000              |              |
|                             | Street trees along the rest of the street (with cast iron grates on 8% of the street)   | \$1,126,678            |              |
|                             | Other landscaped medians  | \$2,177,593            | \$5,070,138  |
| Artesia Blvd.<br>3.3 mi.    | Gateway medians, street trees, sign & lighting - west (0.25 mi.) & east (0.25 mi.)  | \$393,012              |              |
|                             | Street trees along the rest of the street (with cast iron grates on 2% of the street)   | \$767,541              |              |
|                             | Pedestrian amenities at 12 bus stops (an average of 2 every 1/2 mile)   | \$300,000              |              |
|                             | Refurbish other existing medians  | \$434,119              | \$1,894,672  |
| Cherry Ave.<br>2.4 mi.      | Gateway medians, street trees, sign & lighting - 70th St. to Artesia Blvd. (0.50 mi.)   | \$536,710              |              |
|                             | Street trees along the rest of the street (with cast iron grates on 1% of the street)   | \$552,451              |              |
|                             | Pedestrian amenities at 10 bus stops  | \$250,000              |              |
|                             | Landscape existing median and add new landscaped medians  | \$747,470              | \$2,086,632  |
| South St.<br>2.6 mi.        | Gateway medians, street trees, sign & lighting - Downey Av. to Obispo Av. (0.25 mi.)  | \$357,674              |              |
|                             | Street trees - Dairy Av. to Atlantic Av.  | \$93,438               |              |
|                             | Street trees - Atlantic Av. to eastern City limit (with cast iron grates on 2% of the street)   | \$621,708              |              |
|                             | Pedestrian amenities at 8 bus stops (an average of 2 every 1/2 mile)  | \$200,000              |              |
|                             | Landscaped medians  | \$996,995              | \$2,269,816  |
| Market St.<br>2.3 mi.       | Trees in front yards of new development and existing housing  | \$257,861              |              |
|                             | Landscaped medians  | \$1,144,915            | \$1,402,776  |
| Orange Ave.<br>2.6 mi.      | Pedestrian amenities at 10 bus stops (an average of 2 every 1/2 mile)   | \$250,000              |              |
|                             | Street trees where they are missing (with cast iron grates on 1% of the street)   | \$339,893              | \$589,893    |
| Del Amo Blvd.<br>1.7 mi.    | Pedestrian amenities at 4 bus stops where sidewalks are wider than 6'   | \$100,000              |              |
|                             | Gateway medians, street trees, sign & lighting - west (0.45 mi.) & east (0.45 mi.)  | \$307,522              |              |
|                             | Refurbish other existing medians  | \$430,311              | \$837,833    |
| Paramount Blvd.<br>1.9 mi.  | Gateway medians, street trees, sign & lighting - 70th St. to Artesia Blvd. (0.50 mi.)   | \$549,079              |              |
|                             | Street trees along the rest of the street (with cast iron grates on 1% of street)   | \$405,551              |              |
|                             | Other landscaped medians  | \$1,342,253            | \$2,296,883  |
| Downey Ave.<br>1.5 mi.      | Gateway medians, street trees, sign & lighting - 70th St. to Artesia Blvd. (0.50 mi.)   | \$378,977              |              |
|                             | Pedestrian amenities at 6 bus stops   | \$150,000              |              |
|                             | Street trees where they are missing along the rest of the street  | \$277,635              | \$806,612    |
| Total                       |   |                        | \$22,689,341 |



## V. THREE-YEAR SPECIFIC ACTION PLAN

## V. THREE-YEAR SPECIFIC ACTION PLAN

The Three-Year Specific Action Plan is based on the following assumptions:

1. \$18 million will be available in the next three years for both infrastructure and streetscape improvements.
2. Of that total, approximately 60% would be used for infrastructure improvements and 40% for streetscape improvements, at the request of the community.

Figures V-1 through V-3 show the locations of the top priority infrastructure improvements to be undertaken in the next three years. Tables V-1 through V-3 list the specific street and alley segments to be improved and the estimated cost of each improvement.

Figure V-4 shows the locations of the top priority streetscape improvements recommended to be undertaken in the next three years. Table V-4 lists the specific streetscape improvements to be made by street and the estimated cost of each improvement.

The recommended Three-Year Specific Action Plan, which is estimated to cost \$18 million, including direct construction, construction contingency, design and construction inspection, includes the following improvements:

- ❑ Reconstruction of 1.23 miles of streets, including curbs gutters and ADA access ramps.
- ❑ Restructuring of 15.95 miles of streets, including curbs, gutters and ADA access ramps.
- ❑ Paving of all dirt alleys.
- ❑ Pedestrian improvements in the North Village Center on Atlantic Avenue between 56th and 59th Streets and on Long Beach Boulevard one block north and two blocks south of Market Street. The following improvements are recommended as part of the Three-Year Specific Action Plan:

### **North Village Center**

- Remove medians/widen sidewalks
- Curb extensions at midblock crosswalks
- Decorative paving on portions of sidewalks that are widened
- Decorative crosswalk paving at 56th, South and 59th Streets and at midblock crossings
- Street trees with either 4' x 8' tree wells with mulch or 6' x 6' tree wells with cast iron grates
- Pedestrian street lights and conduit for future uplighting of trees
- Bus shelters, trash receptacles, benches and other furnishings
- Public art

### **Long Beach Boulevard at Market Street**

- Corner curb extensions and decorative crosswalk paving at Louise, Market, Plymouth and 53rd Streets
  - Street trees with either 4' x 8' tree wells with mulch or 6' x 6' tree wells with cast iron grates
  - Pedestrian street lights
  - Bus shelters, trash receptacles, benches and other furnishings
  - Public art
- ❑ Gateway improvements on the arterials streets where they enter the City of Long Beach. Recommended gateway improvements include landscaped medians with a gateway sign and uplighting, as well as street trees in landscaped parkways. Street segments proposed to receive gateway improvements include:
- Atlantic Avenue from Atlantic Place to the 91 Freeway;
  - Long Beach Boulevard from Greenleaf Boulevard to Artesia Boulevard;
  - Artesia Boulevard from the western city limit to Long Beach Boulevard and from Downey Avenue to Obispo Avenue;
  - Cherry Avenue from the northern City limit to the 91 Freeway;
  - South Street from Downey Avenue to Obispo Avenue;
  - Del Amo Boulevard from the Los Angeles River to Long Beach Boulevard and from Cherry Avenue to Orange Avenue;
  - Paramount Boulevard from 70<sup>th</sup> Street to 60<sup>th</sup> Street;
  - Downey Avenue from 70<sup>th</sup> Street to the 91 Freeway.
- ❑ Street trees along the entire length of Long Beach Boulevard and along the entire length of South Street in North Long Beach.

Maintenance of the recommended gateway medians<sup>1</sup> is estimated to cost \$80,000 per year, assuming maintenance by City crews at an average cost of \$0.80 per square foot per year. Maintenance of the proposed street trees at the gateways in the North Village Center, and along Long Beach Boulevard and South Street is estimated to cost an average of \$84,000 per year if the trees receive training trimming every 2 years for the first 4 years and are pruned every 6 years thereafter.

<sup>1</sup> Approximately 9,100 linear feet (1.73 miles) of 14-foot-wide raised medians, in which the landscaped area would be an average of 11-feet wide.



Figure V-I. Three-Year Specific Action Plan for Local Street Pavement Reconstruction with Curb and Gutter

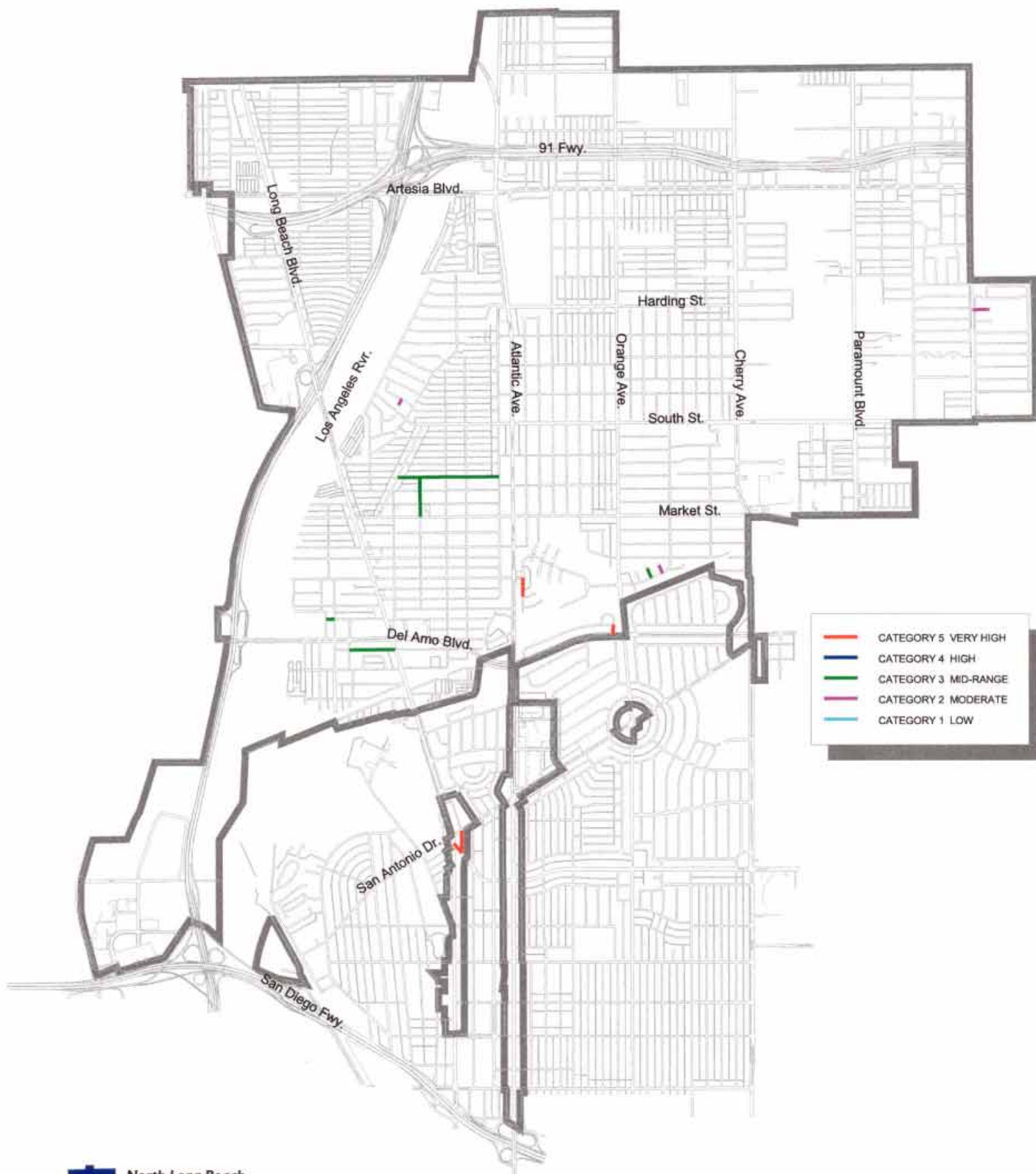




Figure V-2. Three-Year Specific Action Plan for Local Street Pavement Restructuring with Curb and Gutter

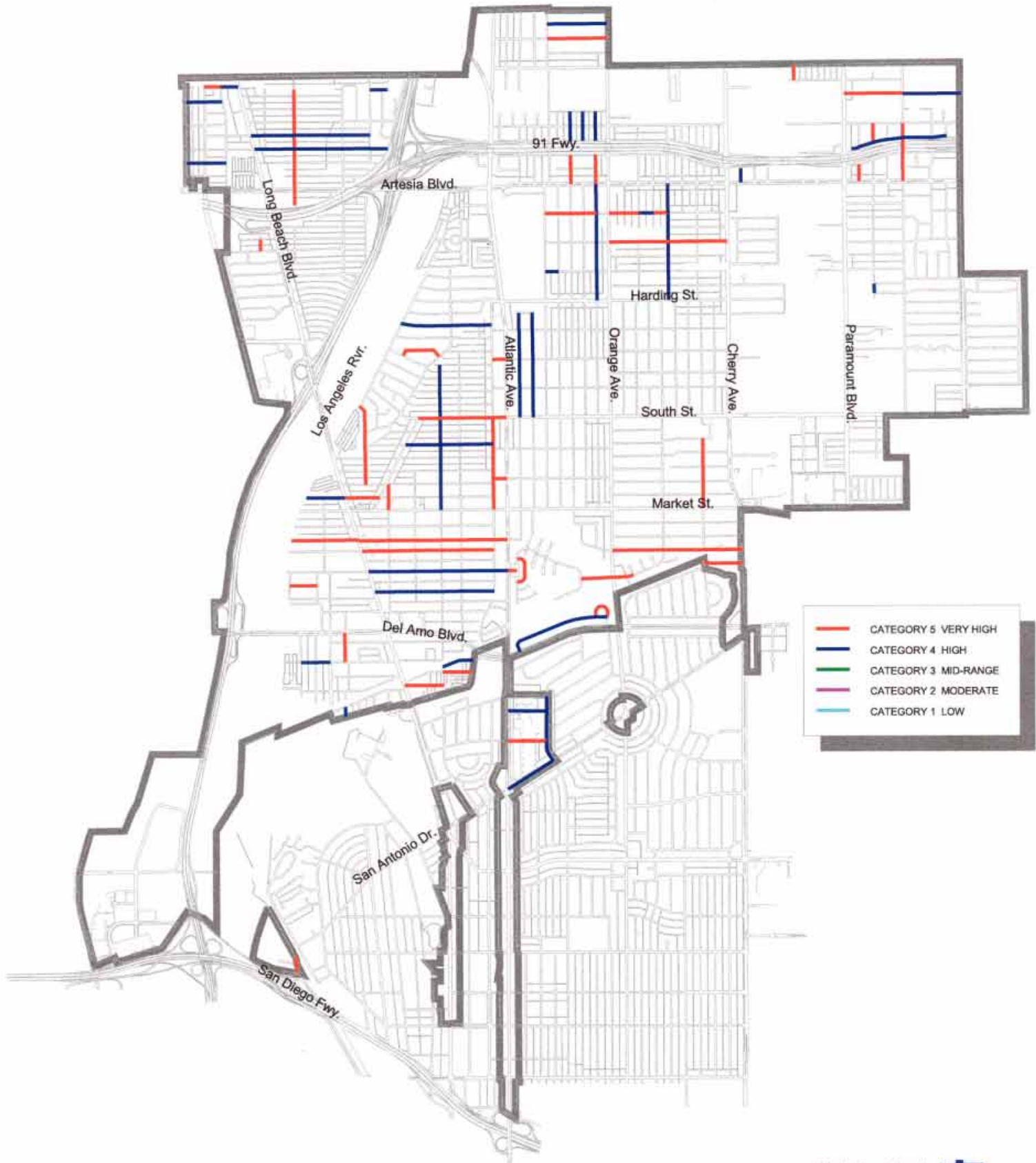
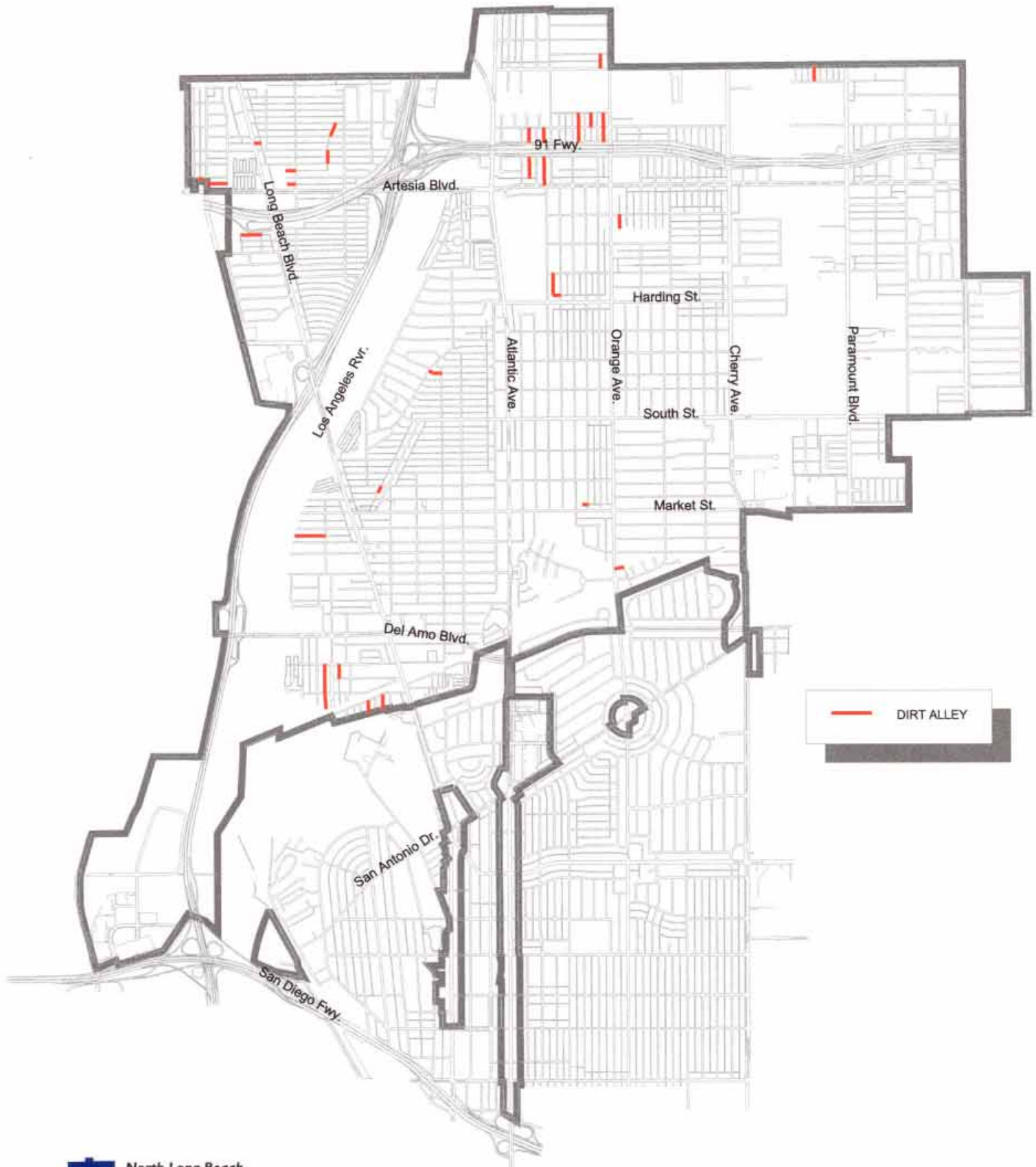


Figure V-3. Three-Year Specific Action Plan for Dirt Alley Reconstruction



**Table V-1. Three - Year Specific Plan for Local Street Pavement Reconstruction with Curb and Gutter**

| Street            | From       | To                  | Surface | Length<br>(Ft) | Width<br>(Ft) | Cost Pvmt. | C & G<br>(Ft) | C & G Cost | Priority | Comb. Cat. | Total Cost   | Cat. Sub.  | Cum. Cost    |
|-------------------|------------|---------------------|---------|----------------|---------------|------------|---------------|------------|----------|------------|--------------|------------|--------------|
| Business          | Carson     | San Anton           | AC      | 400            | 27            | 51,493     | 504           | \$ 14,490  | 0.0417   | 5          | \$ 65,983    |            | \$ 65,983    |
| Carson            | Long Beach | Business            | AC      | 200            | 45            | \$ 42,911  | 277           | \$ 7,964   | 0.0301   | 5          | \$ 50,875    |            | \$ 116,858   |
| Bentree           | Silva      | Del Amo             | AC      | 160            | 32            | \$ 22,074  | 222           | \$ 6,383   | 0.0272   | 5          | \$ 28,456    |            | \$ 145,314   |
| Via Veranda       | 52nd       | Via Almdro          | AC      | 650            | 32            | \$ 89,675  | 257           | \$ 7,389   | 0.0233   | 5          | \$ 97,064    | \$ 242,378 | \$ 242,378   |
| Home St.          | Pacific    | Daisy               | AC      | 250            | 30            | \$ 35,759  | 188           | \$ 5,405   | 0.0104   | 3          | \$ 41,164    |            | \$ 283,542   |
| Pine              | Market     | Ellis               | AC      | 740            | 28            | \$ 102,283 | 300           | \$ 8,625   | 0.0100   | 3          | \$ 110,908   |            | \$ 394,450   |
| Gundry            | 52nd       | End                 | AC      | 250            | 27            | \$ 32,183  | 233           | \$ 6,699   | 0.0095   | 3          | \$ 38,882    |            | \$ 433,331   |
| Pleasant          | Virginia   | Long Beach          | AC      | 954            | 30            | \$ 136,456 | 326           | \$ 9,373   | 0.0082   | 3          | \$ 145,829   |            | \$ 579,160   |
| Ellis             | Dairy      | Linden              | AC      | 2210           | 30            | \$ 316,110 | 490           | \$ 14,088  | 0.0080   | 3          | \$ 330,197   | \$ 666,980 | \$ 909,358   |
| Hullett turn      | Hullett    | End                 | AC      | 120            | 28            | \$ 14,486  | 153           | \$ 4,399   | 0.0079   | 2          | \$ 18,885    |            | \$ 928,242   |
| Janice            | Downey     | (end of street)     | AC      | 350            | 30            | \$ 50,063  | 0             | \$ -       | 0.0072   | 2          | \$ 50,063    |            | \$ 978,305   |
| Falcon            | 52nd       | (End of cul-de-sac) | AC      | 230            | 28            | \$ 27,765  | 200           | \$ 5,750   | 0.0059   | 2          | \$ 33,515    | \$ 102,462 | \$ 1,011,820 |
| Total Miles: 1.23 |            |                     |         | 6,514          |               | \$ 921,257 | 3,150         | \$ 90,563  |          |            | \$ 1,011,820 |            |              |

**Table V-2. Three - Year Specific Plan for Local Street Pavement Restructuring with Curb and Gutter**

| Street         | From                | To                   | Surface | Length<br>(Ft) | Width<br>(Ft) | Only. Thk.<br>(In) | Cost Pwmt. | C & G<br>(Ft) | C & G Cost | Priority | Comb. Cat. | Total Cost | Cat. Sub.    | Cum. Cost    |
|----------------|---------------------|----------------------|---------|----------------|---------------|--------------------|------------|---------------|------------|----------|------------|------------|--------------|--------------|
| Atlantic Plaza | Atlantic            | Via Veran            | AC      | 140            | 36            | 3.3                | \$ 9,644   | 0             | \$ -       | 0.6675   | 5          | \$ 9,644   |              | \$ 9,644     |
| Jackson St.    | Orange              | (Railroad)           | AC      | 570            | 32            | 2.0                | \$ 45,518  | 859           | \$ 24,696  | 0.3533   | 5          | \$ 70,214  |              | \$ 79,858    |
| 60th           | Atlantic            | Linden               | AC      | 230            | 30            | 2.1                | \$ 8,693   | 310           | \$ 8,913   | 0.3487   | 5          | \$ 17,606  |              | \$ 97,464    |
| 55th           | Atlantic            | Linden               | AC      | 250            | 29            | 2.1                | \$ 9,257   | 307           | \$ 8,826   | 0.3416   | 5          | \$ 18,083  |              | \$ 115,547   |
| Cedar          | Market              | Dairy                | AC      | 510            | 28            | 2.0                | \$ 17,865  | 591           | \$ 16,991  | 0.3063   | 5          | \$ 34,856  |              | \$ 150,403   |
| 65th           | Falcon              | Walnut               | AC      | 330            | 30            | 2.0                | \$ 12,049  | 0             | \$ -       | 0.3048   | 5          | \$ 12,049  |              | \$ 162,452   |
| 69th           | Obispo              | Paramount            | AC      | 1250           | 29            | 2.0                | \$ 44,713  | 1,323         | \$ 38,036  | 0.2951   | 5          | \$ 82,750  |              | \$ 245,201   |
| Bentree Circle | Silva               | Silva                | AC      | 550            | 32            | 2.0                | \$ 20,898  | 644           | \$ 18,515  | 0.2892   | 5          | \$ 39,413  |              | \$ 284,614   |
| 71st           | Myrtle              | Orange               | AC      | 1270           | 30            | 1.7                | \$ 37,392  | 660           | \$ 18,975  | 0.2758   | 5          | \$ 56,367  |              | \$ 340,981   |
| 53rd           | Long Beach          | L.A. River Basin     | AC      | 1500           | 29            | 2.0                | \$ 53,656  | 732           | \$ 21,045  | 0.2732   | 5          | \$ 74,701  |              | \$ 415,682   |
| Chestnut       | 55th                | De Forest            | AC      | 1790           | 28            | 2.0                | \$ 62,702  | 655           | \$ 18,831  | 0.2728   | 5          | \$ 81,533  |              | \$ 497,215   |
| Arbor          | Long Beach          | End                  | AC      | 1550           | 38            | 2.0                | \$ 65,792  | 444           | \$ 12,765  | 0.2700   | 5          | \$ 78,557  |              | \$ 575,772   |
| 65th           | Brayton             | Gundry               | AC      | 330            | 30            | 2.0                | \$ 12,049  | 0             | \$ -       | 0.2651   | 5          | \$ 12,049  |              | \$ 587,821   |
| South Street   | Dairy               | Atlantic             | AC      | 2269           | 60            | 2.4                | \$ 281,750 | 1,000         | \$ 28,750  | 0.2583   | 5          | \$ 310,500 |              | \$ 898,321   |
| Ambeco         | Pacific Railroad    | End                  | AC      | 350            | 27            | 2.2                | \$ 13,404  | 307           | \$ 8,826   | 0.2495   | 5          | \$ 22,231  |              | \$ 920,552   |
| 65th           | Orange              | Brayton              | AC      | 310            | 30            | 2.2                | \$ 12,614  | 0             | \$ -       | 0.2474   | 5          | \$ 12,614  |              | \$ 933,166   |
| Linden         | Market              | South                | AC      | 1960           | 33            | 2.0                | \$ 75,926  | 295           | \$ 8,481   | 0.2419   | 5          | \$ 84,407  |              | \$ 1,017,573 |
| 53rd           | Long Beach          | Atlantic             | AC      | 3280           | 39            | 2.1                | \$ 146,682 | 677           | \$ 19,464  | 0.2417   | 5          | \$ 166,146 |              | \$ 1,183,719 |
| 70th           | Gale                | Harbor               | AC      | 300            | 30            | 1.7                | \$ 8,833   | 660           | \$ 18,975  | 0.2367   | 5          | \$ 27,808  |              | \$ 1,211,526 |
| Virginia       | 49th                | Del Amo              | AC      | 560            | 36            | 2.0                | \$ 22,939  | 221           | \$ 6,354   | 0.2345   | 5          | \$ 29,293  |              | \$ 1,240,819 |
| Mountainview   | Long Beach          | Linden               | AC      | 2900           | 36            | 2.0                | \$ 118,793 | 610           | \$ 17,538  | 0.2314   | 5          | \$ 136,330 |              | \$ 1,377,149 |
| 64th           | Cherry              | Orange               | AC      | 2580           | 36            | 2.0                | \$ 105,685 | 658           | \$ 18,918  | 0.2235   | 5          | \$ 124,602 |              | \$ 1,501,751 |
| 45th Street    | Atlantic            | California           | AC      | 710            | 58            | 2.0                | \$ 42,956  | 166           | \$ 4,773   | 0.2210   | 5          | \$ 47,729  |              | \$ 1,549,480 |
| Zane           | DeForrest           | Daisy                | AC      | 600            | 32            | 1.7                | \$ 18,456  | 624           | \$ 17,940  | 0.2205   | 5          | \$ 36,396  |              | \$ 1,585,876 |
| Adair          | 60th                | Jaymills             | AC      | 850            | 30            | 2.0                | \$ 31,036  | 946           | \$ 27,198  | 0.2204   | 5          | \$ 58,233  |              | \$ 1,644,109 |
| Newton         | 70th                | Thompson             | AC      | 250            | 30            | 2.0                | \$ 9,128   | 322           | \$ 9,258   | 0.2200   | 5          | \$ 18,386  |              | \$ 1,662,495 |
| Curtis Avenue  | Artesia             | 67th                 | AC      | 300            | 28            | 1.7                | \$ 8,437   | 394           | \$ 11,328  | 0.2173   | 5          | \$ 19,765  |              | \$ 1,682,260 |
| Obispo         | 68th                | Artesia              | AC      | 1240           | 37            | 2.2                | \$ 55,376  | 660           | \$ 18,975  | 0.2171   | 5          | \$ 74,351  |              | \$ 1,756,611 |
| 65th           | Orange              | Myrtle               | AC      | 1080           | 28            | 2.1                | \$ 39,158  | 288           | \$ 8,280   | 0.2163   | 5          | \$ 47,438  |              | \$ 1,804,048 |
| Rose           | Market              | Phillips             | AC      | 1410           | 33            | 1.8                | \$ 46,227  | 60            | \$ 1,725   | 0.2152   | 5          | \$ 47,952  |              | \$ 1,852,001 |
| Louise         | Long Beach          | Dairy                | AC      | 700            | 30            | 2.0                | \$ 25,559  | 783           | \$ 22,511  | 0.2141   | 5          | \$ 48,070  |              | \$ 1,900,071 |
| Lewis Avenue   | Artesia             | 67th                 | AC      | 550            | 30            | 1.7                | \$ 16,193  | 822           | \$ 23,633  | 0.2135   | 5          | \$ 39,826  |              | \$ 1,939,896 |
| Via Wanda      | Orange              | Via Carmelitos       | AC      | 660            | 30            | 2.0                | \$ 24,098  | 723           | \$ 20,786  | 0.2133   | 5          | \$ 44,885  |              | \$ 1,984,781 |
| 52nd           | Cherry              | Rose                 | AC      | 840            | 27            | 1.7                | \$ 23,071  | 865           | \$ 24,869  | 0.2125   | 5          | \$ 47,940  |              | \$ 2,032,721 |
| Cerritos       | 67th                | Artesia              | AC      | 550            | 30            | 2.0                | \$ 20,082  | 468           | \$ 13,455  | 0.2109   | 5          | \$ 33,537  |              | \$ 2,066,258 |
| Orcutt         | Bort                | Forhan               | AC      | 370            | 27            | 1.7                | \$ 10,162  | 269           | \$ 7,734   | 0.2099   | 5          | \$ 17,896  |              | \$ 2,084,154 |
| 47th Street    | Long Beach          | Perpendicular to Loc | AC      | 860            | 32            | 2.0                | \$ 32,677  | 883           | \$ 25,386  | 0.2088   | 5          | \$ 58,063  |              | \$ 2,142,216 |
| Via Passi      | Via Veran           | Via Veran            | AC      | 900            | 17            | 2.0                | \$ 24,183  | 0             | \$ -       | 0.2053   | 5          | \$ 24,183  |              | \$ 2,166,399 |
| 52nd Street    | Orange              | Brayton              | AC      | 250            | 38            | 2.0                | \$ 10,612  | 445           | \$ 12,794  | 0.2041   | 5          | \$ 23,405  |              | \$ 2,189,805 |
| Muriel         | (Just past Artesia) | Orleans              | AC      | 1990           | 30            | 2.1                | \$ 75,214  | 298           | \$ 8,568   | 0.2029   | 5          | \$ 83,781  |              | \$ 2,273,586 |
| Orizaba        | 68th                | 67th Way             | AC      | 450            | 29            | 1.7                | \$ 12,953  | 437           | \$ 12,564  | 0.2008   | 5          | \$ 25,516  | \$ 2,299,102 | \$ 2,299,102 |
| 52nd Street    | Atlantic            | Long Beach           | AC      | 3080           | 36            | 2.1                | \$ 130,629 | 468           | \$ 13,455  | 0.1997   | 4          | \$ 144,084 |              | \$ 2,443,186 |
| Cerritos       | Penfold             | Inez                 | AC      | 590            | 30            | 2.0                | \$ 21,542  | 394           | \$ 11,328  | 0.1983   | 4          | \$ 32,870  |              | \$ 2,476,056 |
| 65th           | Gundry              | Falcon               | AC      | 310            | 30            | 1.7                | \$ 9,127   | 0             | \$ -       | 0.1972   | 4          | \$ 9,127   |              | \$ 2,485,183 |



**Table V-2. Three - Year Specific Plan for Local Street Pavement Restructuring with Curb and Gutter**

| Street             | From           | To                   | Surface | Length<br>(Ft) | Width<br>(Ft) | Only. Thk.<br>(In) | Cost Pmnt.<br>(In) | C & G<br>(Ft) | C & G Cost | Priority | Comb. Cat. | Total Cost | Cat. Sub.    | Cum. Cost    |
|--------------------|----------------|----------------------|---------|----------------|---------------|--------------------|--------------------|---------------|------------|----------|------------|------------|--------------|--------------|
| Locust             | South          | 60th                 | AC      | 1060           | 27            | 2.0                | \$ 36,344          | 305           | \$ 8,769   | 0.1970   | 4          | \$ 45,113  |              | \$ 2,530,296 |
| Silva              | Del Amo        | Bentree Circle       | AC      | 2300           | 35            | 2.0                | \$ 92,509          | 2,324         | \$ 66,815  | 0.1967   | 4          | \$ 159,324 |              | \$ 2,689,620 |
| Cummings           | Gale           | Just past Delta      | AC      | 830            | 27            | 1.7                | \$ 22,796          | 300           | \$ 8,625   | 0.1965   | 4          | \$ 31,421  |              | \$ 2,721,041 |
| Cerritos           | Artesia        | Harding              | AC      | 2490           | 27            | 2.0                | \$ 85,375          | 660           | \$ 18,975  | 0.1962   | 4          | \$ 104,350 |              | \$ 2,825,392 |
| 69th Way           | White          | (Just past Beechley) | AC      | 420            | 31            | 2.0                | \$ 15,647          | 298           | \$ 8,568   | 0.1958   | 4          | \$ 24,214  |              | \$ 2,849,606 |
| Smith              | De Forest      | Linden               | AC      | 2000           | 29            | 2.0                | \$ 71,542          | 641           | \$ 18,429  | 0.1958   | 4          | \$ 89,970  |              | \$ 2,939,576 |
| 68th               | Long Beach     | White                | AC      | 2700           | 30            | 2.0                | \$ 98,584          | 1,097         | \$ 31,539  | 0.1949   | 4          | \$ 130,123 |              | \$ 3,089,699 |
| 67th Way           | Long Beach     | Coachella            | AC      | 3000           | 30            | 2.0                | \$ 109,538         | 1,095         | \$ 31,481  | 0.1934   | 4          | \$ 141,019 |              | \$ 3,210,718 |
| 70th               | Gale           | Long Beach           | AC      | 370            | 32            | 1.7                | \$ 11,381          | 785           | \$ 22,569  | 0.1927   | 4          | \$ 33,950  |              | \$ 3,244,668 |
| Locust             | Market         | South                | AC      | 1940           | 27            | 2.0                | \$ 66,517          | 298           | \$ 8,568   | 0.1920   | 4          | \$ 75,085  |              | \$ 3,319,752 |
| San Antonio        | Atlantic       | California           | AC      | 1170           | 78            | 2.4                | \$ 92,815          | 460           | \$ 13,225  | 0.1911   | 4          | \$ 106,040 |              | \$ 3,425,793 |
| 67th Way           | Curtis         | Obispo               | AC      | 1000           | 28            | 1.7                | \$ 28,124          | 334           | \$ 9,603   | 0.1909   | 4          | \$ 37,727  |              | \$ 3,463,519 |
| Sunset             | Long Beach     | Linden               | AC      | 2640           | 30            | 2.0                | \$ 96,393          | 735           | \$ 21,131  | 0.1903   | 4          | \$ 117,524 |              | \$ 3,581,044 |
| 45th Way           | Atlantic       | California           | AC      | 710            | 37            | 2.0                | \$ 29,610          | 860           | \$ 24,725  | 0.1903   | 4          | \$ 54,335  |              | \$ 3,635,379 |
| Lemon              | Penfold        | Inez                 | AC      | 570            | 30            | 1.7                | \$ 16,782          | 322           | \$ 9,258   | 0.1903   | 4          | \$ 26,040  |              | \$ 3,661,419 |
| Virginia           | City Limit     | 47th                 | AC      | 120            | 36            | 1.5                | \$ 3,660           | 226           | \$ 6,498   | 0.1901   | 4          | \$ 10,157  |              | \$ 3,671,576 |
| Taylor             | Gale           | (Past Delta end)     | AC      | 780            | 28            | 1.7                | \$ 21,937          | 401           | \$ 11,529  | 0.1898   | 4          | \$ 33,466  |              | \$ 3,705,042 |
| 49th               | Drainage Basin | Locust               | AC      | 2100           | 30            | 2.0                | \$ 76,676          | 469           | \$ 13,484  | 0.1883   | 4          | \$ 90,160  |              | \$ 3,795,202 |
| 69th               | Obispo         | Downey               | AC      | 1220           | 37            | 2.0                | \$ 50,880          | 1,321         | \$ 37,979  | 0.1863   | 4          | \$ 88,859  |              | \$ 3,884,060 |
| Louise             | Long Beach     | L.A. River Basin     | AC      | 890            | 30            | 1.7                | \$ 26,204          | 392           | \$ 11,270  | 0.1860   | 4          | \$ 37,474  |              | \$ 3,921,534 |
| Norton             | Linden         | Dairy                | AC      | 1910           | 30            | 1.7                | \$ 56,235          | 787           | \$ 22,626  | 0.1850   | 4          | \$ 78,861  |              | \$ 4,000,395 |
| Olive              | Janice         | South                | AC      | 2400           | 30            | 2.0                | \$ 87,630          | 660           | \$ 18,975  | 0.1846   | 4          | \$ 106,605 |              | \$ 4,107,000 |
| 67th               | Obispo         | Johnson              | AC      | 1000           | 40            | 1.7                | \$ 36,032          | 663           | \$ 19,061  | 0.1825   | 4          | \$ 55,093  |              | \$ 4,162,093 |
| Walnut             | Artesia        | Harding              | AC      | 2410           | 33            | 1.8                | \$ 79,013          | 660           | \$ 18,975  | 0.1815   | 4          | \$ 97,988  |              | \$ 4,260,081 |
| California         | San Antonio    | 46th                 | AC      | 1340           | 77            | 2.0                | \$ 99,957          | 325           | \$ 9,344   | 0.1796   | 4          | \$ 109,301 |              | \$ 4,369,381 |
| 63rd               | Myrtle         | California           | AC      | 260            | 33            | 1.8                | \$ 8,524           | 0             | \$ -       | 0.1790   | 4          | \$ 8,524   |              | \$ 4,377,906 |
| Orizaba            | Harding        | Poppy                | AC      | 200            | 16            | 1.8                | \$ 4,223           | 286           | \$ 8,223   | 0.1787   | 4          | \$ 12,445  |              | \$ 4,390,351 |
| 49th               | Pacific        | Oregon               | AC      | 600            | 36            | 2.0                | \$ 24,578          | 331           | \$ 9,516   | 0.1784   | 4          | \$ 34,094  |              | \$ 4,424,445 |
| Schilling          | Artesia        | Artesia Freeway      | AC      | 250            | 35            | 1.5                | \$ 7,474           | 329           | \$ 9,459   | 0.1780   | 4          | \$ 16,932  |              | \$ 4,441,377 |
| Lewis Avenue       | Inez           | Penfold              | AC      | 570            | 30            | 1.7                | \$ 16,782          | 0             | \$ -       | 0.1775   | 4          | \$ 16,782  |              | \$ 4,458,159 |
| 71st Way           | Myrtle         | Orange               | AC      | 1270           | 30            | 1.7                | \$ 37,392          | 0             | \$ -       | 0.1775   | 4          | \$ 37,392  |              | \$ 4,495,551 |
| Lime Avenue        | South          | Janice               | AC      | 400            | 30            | 1.8                | \$ 13,578          | 394           | \$ 11,328  | 0.1766   | 4          | \$ 24,906  | \$ 2,221,355 | \$ 4,520,457 |
| Total Miles: 15.95 |                |                      |         |                |               |                    |                    |               |            |          |            |            |              | \$ 4,520,457 |

**Table V-3. Three - Year Specific Action Plan for Dirt Alley Reconstruction**

| Street          | From         | To               | Surface | Length<br>(Ft.) | Width<br>(Ft.) | Pvmt. Cost | Cum. Cost    |
|-----------------|--------------|------------------|---------|-----------------|----------------|------------|--------------|
| al 33rd/N       | West End     | Pacific          | Dirt    | 900             | 20             | \$ 154,184 | \$ 154,184   |
| al 52nd/S       | Orange       | al Orange/E      | Dirt    | 170             | 20             | \$ 29,124  | \$ 183,308   |
| al 67th Wy/N    | Long Beach   | al Long Beach/E  | Dirt    | 130             | 20             | \$ 22,271  | \$ 205,579   |
| al 67th/S       | Muriel/W 50' | Muriel           | Dirt    | 50              | 20             | \$ 8,566   | \$ 214,144   |
| al Artesia/N    | al Olive/W   | Olive            | Dirt    | 780             | 20             | \$ 133,626 | \$ 347,770   |
| al Artesia/N    | Curtis       | Orizaba          | Dirt    | 300             | 20             | \$ 51,395  | \$ 399,165   |
| al Butler/W     | 67th Way     | 67th             | Dirt    | 300             | 20             | \$ 51,395  | \$ 450,560   |
| al Butler/W     | 68th Wy      | 68th St          | Dirt    | 300             | 20             | \$ 51,395  | \$ 501,954   |
| al Cerritos/W   | Inez         | 68th             | Dirt    | 340             | 20             | \$ 58,247  | \$ 560,202   |
| al Dairy/W      | 55th         | al 55th/S        | Dirt    | 100             | 20             | \$ 17,132  | \$ 577,333   |
| al Delta/E      | Gardner      | South End        | Dirt    | 50              | 20             | \$ 8,566   | \$ 585,899   |
| al Forham/N     | al Busana/E  | Orcutt           | Dirt    | 450             | 20             | \$ 77,092  | \$ 662,991   |
| al Gardner/S    | Harbor       | Gale             | Dirt    | 400             | 14             | \$ 47,968  | \$ 710,959   |
| al Grisham/E    | 47th/100' S  | South End        | Dirt    | 200             | 20             | \$ 34,263  | \$ 745,222   |
| al Grisham/W    | 47th         | South End        | Dirt    | 300             | 20             | \$ 51,395  | \$ 796,617   |
| al Harding/N    | al Myrtle/E  | California       | Dirt    | 180             | 20             | \$ 30,837  | \$ 827,454   |
| al Lake/W       | 70th         | Thompson         | Dirt    | 300             | 20             | \$ 51,395  | \$ 878,849   |
| al Lemon/W      | Inez         | Penfold          | Dirt    | 580             | 20             | \$ 99,363  | \$ 978,212   |
| al Long Beach/E | 68th Way     | al 68th Way/S    | Dirt    | 100             | 20             | \$ 17,132  | \$ 995,343   |
| al Long Beach/E | 69th Street  | al 69th Street/S | Dirt    | 100             | 20             | \$ 17,132  | \$ 1,012,475 |
| al Marker/S     | Muriel/W 70' | Muriel           | Dirt    | 70              | 20             | \$ 11,992  | \$ 1,024,467 |
| al Market/N     | Lemon/W 60'  | Lemon            | Dirt    | 60              | 20             | \$ 10,279  | \$ 1,034,746 |
| al Myrtle/W     | 63rd         | al Harding/N     | Dirt    | 470             | 20             | \$ 80,518  | \$ 1,115,264 |
| al Myrtle/W     | 67th         | Artesia          | Dirt    | 625             | 20             | \$ 107,072 | \$ 1,222,336 |
| al Myrtle/W     | 68th         | Penfold          | Dirt    | 340             | 20             | \$ 58,247  | \$ 1,280,583 |
| al Obispo/W     | North End    | 68th             | Dirt    | 330             | 20             | \$ 56,534  | \$ 1,337,117 |
| al Olive/W      | 67th         | Charity          | Dirt    | 450             | 20             | \$ 77,092  | \$ 1,414,209 |
| al Olive/W      | 68th         | Penfold          | Dirt    | 340             | 20             | \$ 58,247  | \$ 1,472,457 |
| al Orange/E     | 65th Street  | South End        | Dirt    | 300             | 20             | \$ 51,395  | \$ 1,523,851 |
| al Orange/W     | 68th         | Penfold          | Dirt    | 340             | 20             | \$ 58,247  | \$ 1,582,099 |
| al Orange/W     | 70th Wy      | 70th St          | Dirt    | 290             | 20             | \$ 49,681  | \$ 1,631,780 |

**Table V-3. Three - Year Specific Action Plan for Dirt Alley Reconstruction**

| Street            | From              | To         | Surface | Length<br>(Ft.) | Width<br>(Ft.) | Pvmt. Cost          | Cum. Cost    |
|-------------------|-------------------|------------|---------|-----------------|----------------|---------------------|--------------|
| al Orange/W       | Inez              | 68th       | Dirt    | 340             | 20             | \$ 58,247           | \$ 1,690,027 |
| al Osgood/N       | Jaymills          | Locust     | Dirt    | 240             | 20             | \$ 41,116           | \$ 1,731,143 |
| al Pacific/E      | 49th              | Arbor      | Dirt    | 280             | 20             | \$ 47,968           | \$ 1,779,111 |
| al Pacific/W      | 48th              | South End  | Dirt    | 450             | 20             | \$ 77,092           | \$ 1,856,203 |
| al Pacific/W      | 49th              | 48th       | Dirt    | 620             | 20             | \$ 106,216          | \$ 1,962,419 |
| al Plymouth/S     | DeForest (W. End) | Pacific    | Dirt    | 650             | 20             | \$ 111,355          | \$ 2,073,774 |
| al Rose/W         | 48th              | 48th/S 50' | Dirt    | 120             | 20             | \$ 20,558           | \$ 2,094,332 |
| al Ruth/W         | 47th              | South End  | Dirt    | 160             | 20             | \$ 27,410           | \$ 2,121,742 |
| al Scott/S        | Scott             | White      | Dirt    | 130             | 20             | \$ 22,271           | \$ 2,144,013 |
| al Stanley/W      | 70th              | Thompson   | Dirt    | 300             | 20             | \$ 51,395           | \$ 2,195,408 |
| Total Miles: 2.45 |                   |            |         | 12,935          |                | <b>\$ 2,195,408</b> |              |

**Table V-4. Three-Year Specific Action Plan for Streetscape Improvements**

|  | <b>Direct<br/>Construction</b> | <b>Contingency<sup>1</sup></b> | <b>Traffic<br/>Study</b> | <b>Construction<br/>Inspection<sup>2</sup></b> | <b>Total</b>       |
|--|--------------------------------|--------------------------------|--------------------------|--|--------------------|
| <b>Atlantic Avenue</b>   |                                |                                |                          |  |                    |
| <b>North Village Center Pedestrian Improvements</b>  |                                |                                |                          |  |                    |
| Widened sidewalks, decorative crosswalks, street trees, pedestrian lights & furnishings      | \$960,000                      | \$144,000                      | \$7,500                  | \$276,000                                      | \$1,387,500        |
| <b>Gateway Landscaping</b> - Atlantic Pl. to Artesia Blvd. (0.44 mile)                       |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$288,600                      | \$43,290                       | \$7,500                  | \$82,973                                       | \$422,363          |
| <b>Long Beach Boulevard</b>  |                                |                                |                          |  |                    |
| <b>Market St. Pedestrian Improvements</b>  |                                |                                |                          |  |                    |
| Corner curb extensions, decorative crosswalks, street trees, pedestrian lights & furnishings | \$445,000                      | \$66,750                       | \$7,500                  | \$127,938                                      | \$647,188          |
| <b>Gateway Landscaping</b> - Greeneaf Blvd. to so. of 91 Fwy. (0.74 mi.)                     |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$459,951                      | \$68,993                       | \$7,500                  | \$132,236                                      | \$668,679          |
| <b>Street Trees<sup>3,4</sup></b> - along remainder of street                                | \$738,745                      | \$110,812                      |                          | \$212,389                                      | \$1,061,945        |
| <b>Artesia Boulevard</b>   |                                |                                |                          |  |                    |
| Gateway Landscaping - west city limit to Long Beach Blvd. (0.25 mi.)                         |                                |                                |                          |  |                    |
| Trees in parkways; re-landscaped existing medians with sign & lighting                       | \$143,800                      | \$21,570                       |                          | \$41,342                                       | \$206,712          |
| Gateway Landscaping - Downey Av. to Obispo Av. (0.25 mi.)                                    |                                |                                |                          |  |                    |
| Trees in parkways; re-landscaped existing medians with sign & lighting                       | \$129,600                      | \$19,440                       |                          | \$37,260                                       | \$186,300          |
| <b>Cherry Avenue</b>   |                                |                                |                          |  |                    |
| Gateway Landscaping - north city limit. - Artesia Blvd. (0.50 mi.)                           |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$368,146                      | \$55,222                       | \$7,500                  | \$105,842                                      | \$536,710          |
| <b>South Street</b>  |                                |                                |                          |  |                    |
| Gateway Landscaping - Downey Av. To Obispo Av. (0.25 mi.)                                    |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$243,600                      | \$36,540                       | \$7,500                  | \$70,035                                       | \$357,674          |
| Street Trees <sup>3,4</sup> - along remainder of street                                      |                                |                                |                          |  |                    |
| Atlantic Av. to Obispo Av. <sup>4</sup>  | \$432,493                      | \$64,874                       |                          | \$124,342                                      | \$621,708          |
| Dairy Av. to Atlantic - in-ground irrigation   | \$65,000                       | \$9,750                        |                          | \$18,688                                       | \$93,438           |
| <b>Del Amo Boulevard</b>   |                                |                                |                          |  |                    |
| Gateway Landscaping - LA River to Long Beach Blvd. (0.45 mi.)                                |                                |                                |                          |  |                    |
| Trees in parkways from River to Daisy; re-landscaped existing medians; sign & lighting       | \$116,221                      | \$17,433                       |                          | \$33,413                                       | \$167,067          |
| Gateway Landscaping - Cherry Av. to Orange Av. (0.45 mi.)                                    |                                |                                |                          |  |                    |
| Remove paving & landscape existing medians; sign & lighting                                  | \$97,708                       | \$14,656                       |                          | \$28,091                                       | \$140,455          |
| <b>Paramount Boulevard</b>   |                                |                                |                          |  |                    |
| Gateway Landscaping - 70th St. to Artesia Blvd. (0.50 mi.)                                   |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$376,751                      | \$56,513                       | \$7,500                  | \$108,316                                      | \$549,079          |
| <b>Downey Avenue</b>   |                                |                                |                          |  |                    |
| Gateway Landscaping - 70th St. to Artesia Blvd. (0.50 mi.)                                   |                                |                                |                          |  |                    |
| Trees in parkways; landscaped medians with sign & lighting                                   | \$258,419                      | \$38,763                       | \$7,500                  | \$74,295                                       | <u>\$378,977</u>   |
| <b>Total - Streetscape Improvements</b>  |                                |                                |                          |  | <b>\$7,425,795</b> |

<sup>1</sup> 15% of Direct Construction

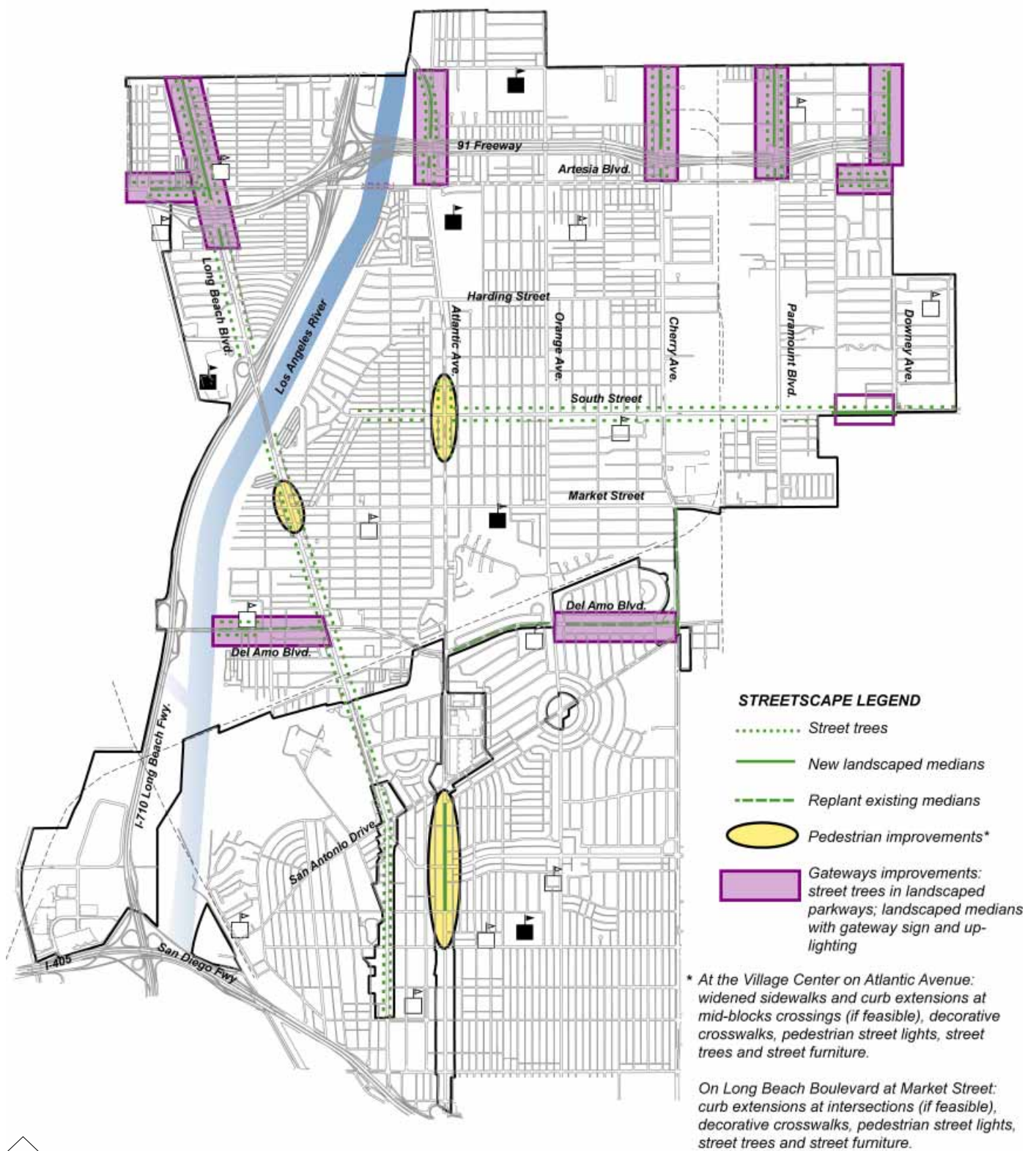
<sup>2</sup> 25% of Direct Construction + Contingency for all improvements, except alleys: 30% for alleys

<sup>3</sup> Includes removal of concrete to provide continuous 4-foot-wide parkways, except at bus stops and in village centers and neighborhood nodes, where 4' x 8' tree wells would be provided.

<sup>4</sup> Cost includes 3 years of weekly watering by water truck; however, in-ground irrigation should be installed where feasible.



Figure V-4. Three-Year Specific Action Plan for Streetscape Improvements



1" = 3,200'



## VI. STREETSCAPE IMPROVEMENTS BY STREET

## **VI. STREETSCAPE IMPROVEMENTS BY STREET**

This section describes specific improvements recommended for each arterial street, as well as relevant background. The streets addressed in this section include:

### ***North-South Streets:***

Long Beach Boulevard  
Atlantic Avenue  
Orange Avenue  
Cherry Avenue  
Paramount Boulevard  
Downey Avenue

### ***East-West Streets:***

Artesia Boulevard  
South Street  
Market Street  
Del Amo Boulevard.

The streets are listed in the order of priority established by community members.



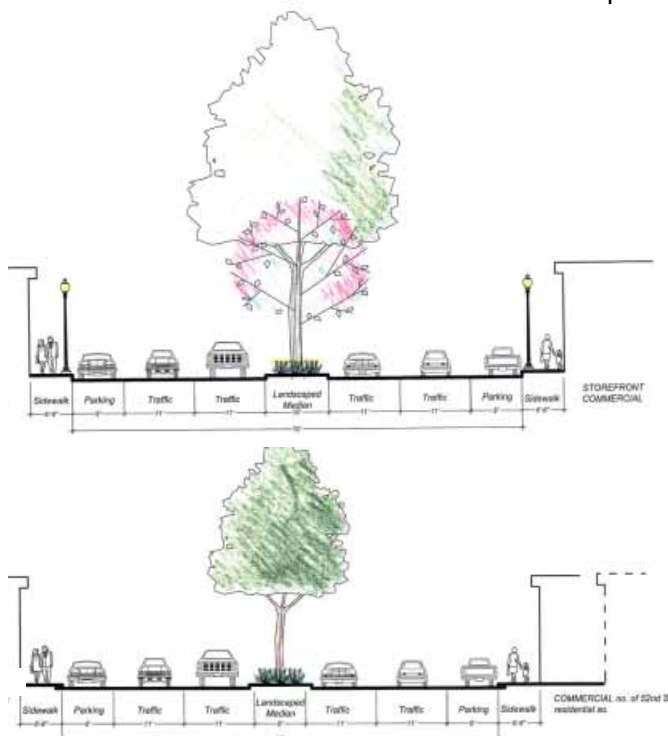
## A. Atlantic Avenue

### Background

**Existing Conditions.** Atlantic Avenue is the primary commercial street serving North Long Beach. It continues south, linking North Long Beach to downtown Long Beach, and north to the San Gabriel Valley. The total length of Atlantic Avenue in the North Long Beach area from the Los Angeles River Crossing on the north to the 405 Freeway on the south, is approximately 4.5 miles.

Existing land uses along Atlantic Avenue are predominantly commercial, with some single-family and multi-family housing north of Del Amo Boulevard. The majority of the commercial uses along Atlantic Avenue north of Bixby Knolls are located on relatively shallow parcels (typically 100' deep) in storefront buildings with facades along the sidewalk. South of San Antonio Road in Bixby Knolls the parcels are deeper (typically 150' deep), generally with storefront buildings.

The right-of-way varies from 78 to 90 feet. The cross section varies from a 65-foot pavement width (including median) with 6.5-foot-wide sidewalks where the right-of-way is 78 feet between 61<sup>st</sup> Street and Del Amo Boulevard to a 70-foot pavement width with 10-foot-wide sidewalks in most other locations. Along most of the street, there are 2 traffic lanes and a parking lane in each direction, with a raised, partially landscaped median or continuous left-turn lane in the center. Along several blocks in Bixby Knolls there is diagonal parking on the east side of the street with no median. The typical sidewalk cross section in retail areas does not include a park-



Existing land uses - see Section IV for legend.

way. Street trees have been planted in Bixby Knolls, but along the majority of the street there are no street trees. Roadway lights on concrete poles are fairly consistently spaced. Utility lines are underground.

Transit service on Atlantic Avenue in North Long Beach is provided by 2 bus lines: Line 61, which runs from the Artesia Blue Line Station to the Downtown Transit Mall, and Line 62, which runs from Alondra Boulevard to the Downtown Transit Mall. There are connections to east-west bus routes at Wardlow Road, Carson Street, Del Amo Boulevard, Market Street and South Street. On weekdays a Line 61 or Line 62 bus stops every 10 minutes between 5:40 am and 5:40 pm and bus service continues until approximately 1:00 am with half-hour headways.

**Bicycle Master Plan.** There are existing Class II bikeways from Artesia Boulevard to Harding Avenue and from 42<sup>nd</sup> Street to San Antonio Drive. There are no additional bikeways proposed along Atlantic Avenue in North Long Beach.

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most commercial uses along Atlantic Avenue north of Del Amo Boulevard to housing, open space or public facilities. The exceptions are the 2 blocks along Atlantic Avenue between 56<sup>th</sup> and 59<sup>th</sup> Streets, designated by the Strategic Guide as the North Village Center, North Long Beach's town center, as well as the neighborhood commercial nodes at Market Street and at Artesia Boulevard. Commercial uses will remain south of Del Amo Boulevard in the Bixby Knolls area: neighborhood-serving, pedestrian-oriented commercial uses along Atlantic Avenue between San Antonio Road and Bixby Road, and subregional commercial uses between Bixby Road and the 405 Freeway.



## Proposed Improvements

**Village Center Improvements.** Improvements to the village centers should be given first priority for streetscape improvements in North Long Beach. Street trees, medians, diagonal parking and furnishings have been installed in the Bixby Knolls Village Center by the merchants associations. In the North Village Center at South Street, which is located along Atlantic Avenue between 56<sup>th</sup> and 59<sup>th</sup> Streets (one block north and one block south of South Street), existing sidewalks are too narrow to accommodate street trees or much pedestrian activity. To address this problem, it is recommended that the existing 10-foot median be eliminated and the existing 6.5-foot wide sidewalks be widened to 10 feet. Before approving this change in roadway configuration, the City will need to undertake a traffic study to assess its traffic impacts. In addition to widening the sidewalks, curb extensions should be added at midblock crosswalks in the village centers to make it easier for pedestrians to cross the street.

Specific improvements recommended for installation as part of the Three-Year Specific Action Plan include:

- ☐ Remove medians/widen sidewalks
- ☐ Curb extensions at midblock crosswalks
- ☐ Decorative paving of sidewalks that are widened
- ☐ Decorative crosswalk paving at 56<sup>th</sup>, South and 59<sup>th</sup> Streets and at midblock crossings
- ☐ Street trees with either 4-foot x 8-foot tree wells with mulch or 6-foot square tree wells with cast iron grates
- ☐ Pedestrian street lights and conduit for future up-lighting of trees
- ☐ Bus shelters, trash receptacles, benches, other furnishings
- ☐ Public art

**Gateway Improvements.** Streetscape improvements should be provided to enhance the northern gateway to the city along Atlantic Avenue from Atlantic Place to the 91 Freeway. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. The Southern California Edison right-of-way located just south of 70<sup>th</sup> Street should receive compatible landscaping along its frontage to a depth of 15 to 20 feet. In addition, the existing triangular median at the junction of Atlantic Avenue and Atlantic Place should be landscaped in the same style as the medians.

**Street trees.** Street trees should be planted at a consistent spacing along the entire length of Atlantic Avenue. Bradford Pears are being planted in the Bixby Knolls areas to alternate with the existing Mexican Fan Palms. North of Del Amo Boulevard *Ginkgo biloba* are recommended.

It is suggested that, where the sidewalks are less than 10

feet wide, in locations other than the Village Center at South Street, the Planning Department consider requiring a front yard setback of 3.5 feet to be treated as sidewalk, which will provide a full 10 feet between building facades and the curb line, as well as the installation of parkways or tree wells and street trees, as a condition of development approval.

At bus stops and in village centers and neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** For the most part, existing medians should be renovated: interlocking pavers will be removed, new irrigation installed, and the entire median area landscaped. New medians should be installed where they can be accommodated. The plans in Appendix S show the approximate locations of medians. The existing median trees (*Eucalyptus* and *Floss Silk*) should remain.

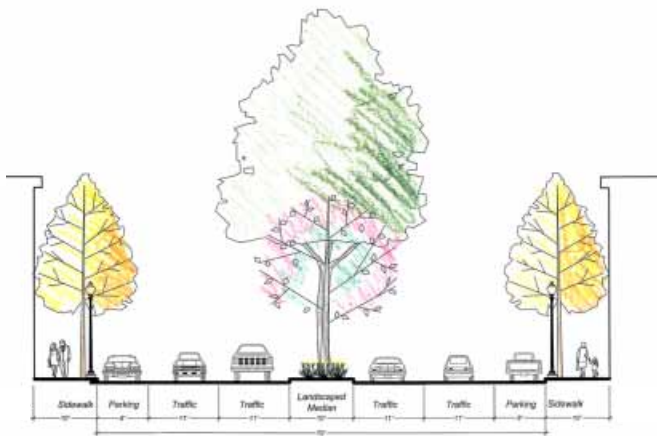
**Pedestrian Amenities and Traffic Calming.** Corner curb extensions are recommended at midblock pedestrian crossings in the village centers and at the intersection crosswalks in Bixby Knoll, if feasible, in conjunction with either decorative or zebra striped crosswalks. Pedestrian street lights are recommended along the entire length of the boulevard: they should be installed first in the commercial districts and then in the residential areas, either incrementally in conjunction with new development or as a series of public improvement projects. Bus shelters and/or seating should be located at bus stops. The recommended pedestrian light fixture is the historic Lumec L80 fixture and 12-foot R30 or R40 pole in dark blue (RAL 5011). The same color should be used for other street furnishings.

**Related Public Improvements.** A pocket park should be provided in the vicinity of the North Village Center at South Street. Ideally, it should be sited in conjunction with both community facilities and retail uses to reinforce the community-serving nature and identity of the Village Center.

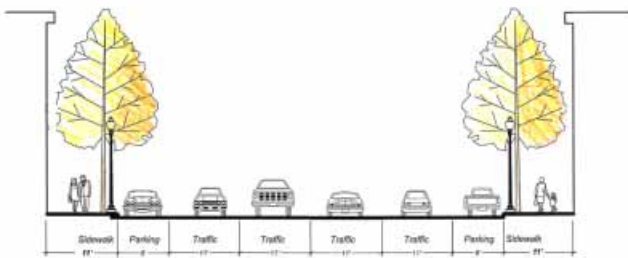
The Strategic Guide recommends that additional public parking be provided at the North Village Center. It is recommended that the parking be provided at the same time as the Three-Year Specific Action Plan streetscape improvements.

**Complementary Private Improvements.** The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



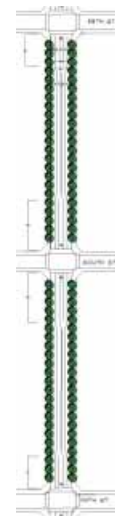
New cross section where 3.5-foot setbacks in conjunction with new development would provide 10-foot wide sidewalks with street trees.



New cross section in the Village Center at South Street where elimination of the median would allow for 10-foot wide sidewalks with street trees and pedestrian-scale street lights.



Proposed improvements - see Section IV for legend.



Plan of Village Center at South Street.



Pedestrian street lights: Lumec L80 (color: dark blue).



Street trees: Ginkgo north of railroad.





Existing street at Southern California Edison right of way (left) and with gateway landscaping added (right).



Existing 6.5-foot wide sidewalks (left) and with 3.5' front setbacks to widen sidewalks to 10 feet (right).



Existing Village Center at South St. (left) and 1) with wide sidewalks instead of a median (above right) or 2) keeping the median and adding pop-out tree wells (lower right).



Existing recently planted trees in Bixby Knolls Village (left) and with mature trees (right).



**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|  |                    |
|--|--------------------|
| Village Center at South St. improvements | \$1,387,500        |
| Northern gateway landscaping             | \$422,363          |
| Bus stop improvements                    | \$450,000          |
| Other street trees (with development)    | \$1,173,646        |
| Other landscaped medians                 | \$2,000,577        |
| <b>Total</b>                             | <b>\$5,434,086</b> |



## B. Long Beach Boulevard

### Background

**Existing Conditions.** Long Beach Boulevard is the westernmost north-south arterial street in North Long Beach. Before the freeways were constructed, it linked Long Beach to the Los Angeles basin, running north and slightly west from Long Beach through Compton, Lynwood and South Gate, and continuing north as Pacific Boulevard through Walnut Park, Huntington Park and Vernon, where it terminates. The total length of the boulevard in the North Long Beach area, from Greenleaf Boulevard on the north to the 405 Freeway on the south, is approximately 4.4 miles.

**Existing land uses** along the boulevard are a mix of single-family and multi-family residential and commercial north of the Los Angeles River crossing and predominantly commercial to the south. The majority of commercial uses on Long Beach Boulevard north of the railroad crossing are located on relatively shallow lots (typically 100' deep) in storefront buildings with facades located along the sidewalk. Virginia City, the original settlement in the North Long Beach area, with its 1- and 2-story storefront buildings, is located at Market Street. To the south, parcels are deeper (typically 150' deep), with storefront and freestanding buildings.

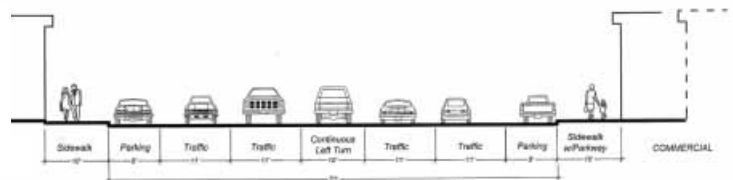
The right-of-way is typically 100 feet. The cross section varies from a 70-foot pavement width with 15-foot-wide sidewalks to an 80-foot pavement width with 10-foot-wide sidewalks. There are 2 traffic lanes and a parking lane in each direction, with either a painted median or continuous left-turn lane along the entire length of the street. The typical sidewalk cross section in residential and office commercial areas consists of a 4- or 6-foot-wide parkway along the curb and a 4- or 6-foot-wide walkway. In retail areas, the typical cross section does not include a parkway.

There are a few street trees north of the 91 Freeway and south of San Antonio Drive, but along the majority of the street there are no street trees. Roadway lighting is very consistently spaced. The concrete light poles, with their curving metal arms and support brackets, provide an attractive, unifying visual element along the street. Except between Bixby Road on the south and Roosevelt Road on the north, utility lines are underground.

Transit service on Long Beach Boulevard in North Long Beach is provided by the Line 5 bus, which runs from the Artesia Blue Line Station to the Downtown Transit Mall. There are connections to east-west bus routes at Wardlow Road, Carson Street, Del Amo Boulevard and South Street. On weekdays the Line 5 bus stops every 15 minutes between the hours of 5:00 am and 7:00 pm with half-hour headways until approximately midnight.



Existing land uses -  
see Section IV for legend.



Typical existing street cross section.



**Bicycle Master Plan.** There are no existing bikeways on Long Beach Boulevard in North Long Beach, and none are proposed by the Bicycle Master Plan.

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most of the commercial land uses north of Del Amo Boulevard to housing, open space or public facilities. Commercial uses will remain south of San Antonio Drive and at three nodes to the north: neighborhood nodes at Artesia Boulevard and Market Street and a subregional node at Del Amo Boulevard.

## Proposed Improvements

**Long Beach Boulevard at Market Street.** The following pedestrian improvements are recommended at Long Beach Boulevard and Market Street (from Louise Street to 53rd Street) as part of the Three-Year Specific Action Plan:

- ❑ Corner curb extensions and decorative crosswalk paving at Louise, Market, Plymouth and 53rd Streets
- ❑ Street trees with either 4-foot x 8-foot tree wells with mulch or 6-foot square tree wells with cast iron grates
- ❑ Pedestrian street lights
- ❑ Bus shelters, trash receptacles, benches, other furnishings
- ❑ Public art.

**Pedestrian amenities and traffic calming.** Corner curb extensions are recommended at the intersection of Long Beach Boulevard with Market Street and two blocks north and one block south, for a total of 4 intersections, in conjunction with either decorative or zebra striped crosswalks. Pedestrian street lights are recommended along the entire length of the boulevard. They should be installed first in the commercial districts and then in the residential areas, either in conjunction with new development or as a series of public improvement projects. Bus shelters and/or seating should be located at bus stops. The recommended pedestrian light fixture is the Selux Ritorno with silver (not white) reflector shade or Cosmo with Type V cut-off silver louver shielding and silver reflector shade on 12-foot poles in metallic gray (RAL 9007). Consistently spaced between the existing road lights, these distinctive lights would enhance the rhythm of the roadway lights and give Long Beach Boulevard a distinctive identity. Other street furniture on Long Beach Boulevard should have a complementary dark burgundy finish (RAL 3007).

**Gateway Improvements.** Streetscape improvements should be provided on Long Beach Boulevard from Greenleaf Boulevard to Artesia Boulevard to enhance the northern gateway to the city. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. The Southern California Edison right-of-way located just south of Greenleaf Boulevard should receive compatible landscaping

along its frontage to a depth of 15 to 20 feet.

**Street trees.** Street trees should be planted at a consistent spacing along the entire length of Long Beach Boulevard in North Long Beach, excluding river and freeway crossings. It is recommended that Chinese Flame trees (*Koelreuteria bipinnata*) be planted north of the river crossing and Mexican Sycamores (*Platanus mexicana*), which stay green most of the year, south.

At bus stops and in village centers and neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** Medians will be installed wherever they can be accommodated. The plans in Appendix S show the approximate location of medians. The Jacaranda (*Jacaranda mimosifolia*) will be the predominant median trees.

**Related Public Improvements.** A pocket park should be provided within the vicinity of Market Street, along either Market Street or Long Beach Boulevard. Ideally, it should be sited in conjunction with both community facilities and retail uses to reinforce the community-serving nature of the Virginia City shopping district. If possible, access to the future river frontage park (expansion of De Forest Park) should be provided from Long Beach Boulevard. Undergrounding utilities in the segment where they are above grade should be a priority.

It is recommended that public parking to serve the pedestrian node at Long Beach Boulevard and Market Street be provided at the same time as the Three-Year Specific Action Plan streetscape improvements.

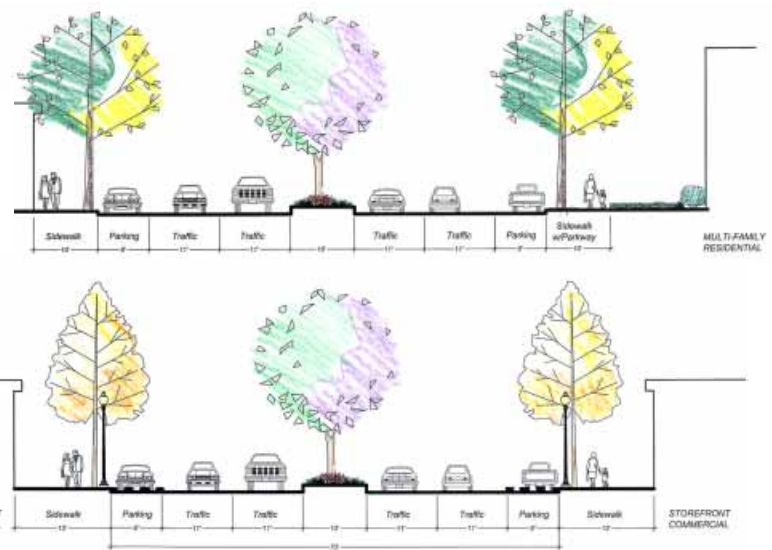
**Complementary Private Improvements.** The majority of properties fronting on Long Beach Boulevard will be converted to or remain residential or office commercial, with front yard setbacks between the sidewalk and buildings or parking lots. The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hard-

ship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



Proposed improvements - see Section IV for legend.



New cross section: residential areas north of the River (above); and commercial areas south of the River (below)



Street trees: Chinese Flame ( left) north of the River and London Plane (right) south.



Primary median tree: Jacaranda.





Pedestrian street lights:  
Selux Ritorno (color: metallic gray).



Existing street At Market Street (left) and with street trees added (right).



Existing street south of San Antonio Road (left) and with median added (right).



Existing corner of Market St. (left) and with parking lot/park and pedestrian improvements (right).



Existing street north of the River (left) and with new housing and streetscape improvements. (right).



Gateway  
bus stop.

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                                       |                    |
|---------------------------------------|--------------------|
| Pedestrian improvements at Market St. | \$647,188          |
| Northern gateway landscaping          | \$688,679          |
| Other street trees                    | \$1,126,679        |
| Bus stop improvements                 | \$450,000          |
| Other landscaped medians              | \$2,177,593        |
| <b>Total</b>                          | <b>\$5,070,138</b> |



## C. Artesia Boulevard

### Background

**Existing Conditions.** Artesia Boulevard is the northernmost major east-west arterial in North Long Beach. It continues east from Long Beach through Bellflower, Cerritos and Artesia to Buena Park. The total length of the boulevard in the North Long Beach area, from Downey Avenue on the east to the Compton College campus on the west, is approximately 3.3 miles.

Existing land uses along Artesia Boulevard are a mix of commercial, industrial, and multi-family and single-family residential.

The right-of-way is typically 100 feet. The typical cross section includes an 80-foot pavement width with 10-foot wide sidewalk. There are two traffic lanes and a parking lane in each direction with a wide (18') raised median or left-turn lanes. The typical sidewalk cross section in residential and industrial areas consists of a 4- to 6-foot wide parkway along the curb and a 4- to 6-foot wide walkway or a 10-foot walkway with 4' square tree wells. In retail areas, the typical sidewalk cross section consists of a 10-foot walkway with 4' square tree wells.

There are some recently planted Evergreen Pear (*Pyrus kawikami*) street trees in the central segment of Artesia Boulevard. Roadway lighting is attached to utility poles on the south side of the street and on concrete poles on the north side. The utility poles on the south side of the street vary in height from approximately 40 to 60 feet with from 1 to 5 rows of power lines.

Transit service on Artesia Boulevard in North Long Beach

is limited to the Line 5 and Line 61 buses, between the Artesia Blue Line Station and Long Beach Boulevard and Atlantic Avenue, respectively.

**Bicycle Master Plan.** There are no existing bikeways on Artesia Boulevard in North Long Beach, and none are proposed by the Bicycle Master Plan.

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most of the commercial land uses between Atlantic Avenue and Cherry Avenue to residential use. Commercial uses will remain at Artesia Boulevard's intersections with the north-south arterials: Long Beach Boulevard, Atlantic Avenue, Orange Avenue, Cherry Avenue, Paramount Boulevard and Downey Avenue

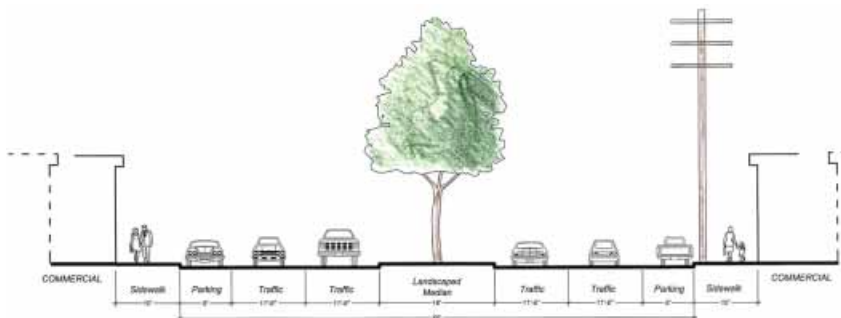
### Proposed Improvements

**Pedestrian amenities and traffic calming.** Corner curb extensions are recommended at the intersection of Artesia Boulevard and Orange Avenue, in conjunction with either decorative or zebra striped crosswalks. Pedestrian street lights are recommended at neighborhood commercial nodes and adjacent to mixed use or multi-family residential development. Bus shelters and/or seating and pedestrian street lights should be located at bus stops. The recommended pedestrian light fixture is the Selux Quadro I with Type V silver louver shielding on 12-foot poles in black (RAL 6005). The same color should be used for other street furnishings.

**Gateway Improvements.** Streetscape improvements should be provided to enhance the western and eastern gateways to the city along Artesia Boulevard from the western City



Existing land uses - see Section IV for legend.



Typical existing typical street cross section.



limit to Long Beach Boulevard and from Downey Avenue to Obispo Avenue. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign.

**Street trees.** Street trees should be planted at a consistent spacing along the entire length of Artesia Boulevard in North Long Beach, excluding river and freeway crossings. Ipe (*Tabebuia ipe*) is recommended to be planted along segments with residential and industrial uses. Ginkgos (*Ginkgo biloba*) is recommended adjacent to commercial uses to identify the commercial areas and to increase visibility to business signs.

At bus stops and neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** Existing medians will be renovated: paving will be removed and the entire surface of the median islands will be landscaped. The existing Eucalyptus trees will remain as the predominant median trees.

**Related Public Improvements.** A pocket park should be provided within the vicinity of Orange Avenue, along either Orange Avenue or Artesia Boulevard. Ideally, it should be sited in conjunction with both community facilities and retail uses to reinforce the community-serving nature of the neighborhood-serving commercial node at the corner.

**Complementary Private Improvements.** The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.

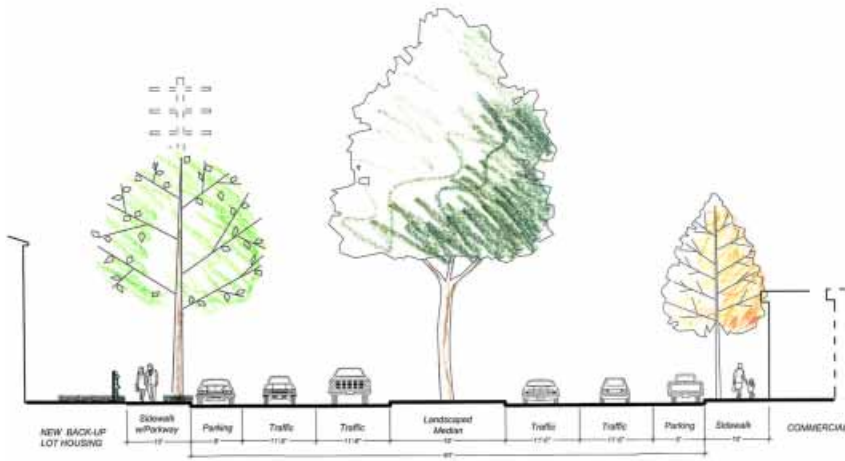
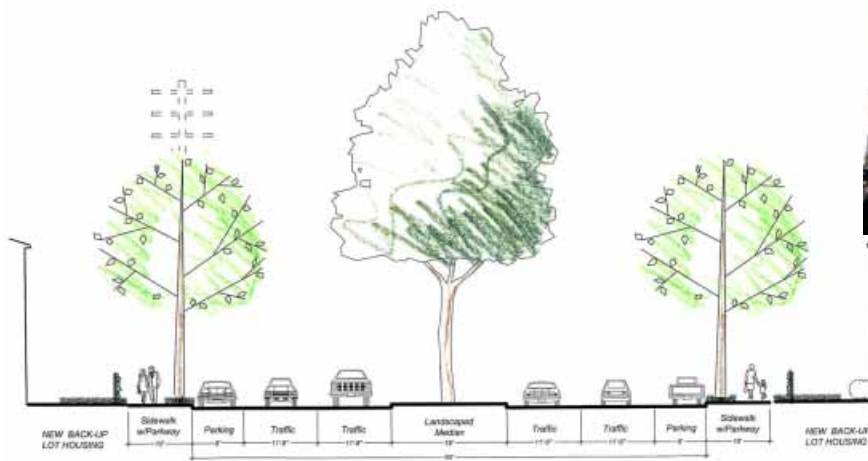


Proposed improvements - see Section IV for legend.





Existing street (left) and with street trees added (right).



New cross sections: residential and industrial area (top) and residential areas (bottom).



Street trees: Ginkgo (top) along storefront commercial buildings; Ipe (bottom) elsewhere.



Street light: Selux Quadro I (color: black)

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                                     |                    |
|-------------------------------------|--------------------|
| Gateway landscaping (east and west) | \$393,012          |
| Bus stop improvements               | \$300,000          |
| Other street trees                  | \$767,541          |
| Other landscaped medians            | \$434,119          |
| <b>Total</b>                        | <b>\$1,894,672</b> |

## D. Cherry Avenue

### Background

**Existing Conditions.** Cherry Avenue is a major north-south arterial, which, like Long Beach Boulevard and Atlantic Avenue, links North Long Beach to the rest of Long Beach to the south and the Los Angeles region to the north. It becomes Garfield Avenue in Paramount and continues north, parallel with Atlantic Avenue, to the San Gabriel Valley. The total length of Cherry Avenue in the North Long Beach area, from 70<sup>th</sup> Street on the north to San Antonio Drive on the south, is approximately 2.4 miles.

Existing land uses are predominantly residential on the west side and industrial on the east side of the street. There are scattered commercial uses along the west side, primarily in the vicinity of South and Market Streets. There are shopping centers on the east side at South and Market Streets.

The right-of-way is typically 100 feet. The typical cross section is an 80-foot pavement width with 10-foot wide sidewalks. There are two traffic lanes and a parking lane in each direction with raised medians south of Market Street and a painted median or continuous left-turn lane to the north. The typical sidewalk cross section consists of a 4- to 6-foot-wide parkway along the curb and a 4- to 6-foot-wide walkway.

There are no street trees along Cherry Street. Roadway lights are concrete. Utility lines are above grade on the west side of the street on 80-foot poles with 6 rows of power lines at heights of between 50 and 80 feet.



Existing land uses - see Section IV for legend.

Transit service on Cherry Avenue in North Long Beach is provided by the Line 21 bus, which runs from Alondra Boulevard to the Downtown Transit Mall. On weekdays the Line 21 bus stops every 30 minutes along Cherry Avenue in North Long Beach between 5:30 am and 8:00 pm.

**Bicycle Master Plan.** There are no existing bicycle facilities on Cherry Avenue in North Long Beach. The Bicycle Master Plan recommends that a bikeway (class unspecified) be installed on Cherry Street in North Long Beach in the mid-term future (6 to 15 years).

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most of the commercial land uses on the west side of the street to residential uses, consistent with adjacent neighborhoods, and on the east side to industrial uses with sub-regional commercial nodes at Artesia Boulevard and Market Street.

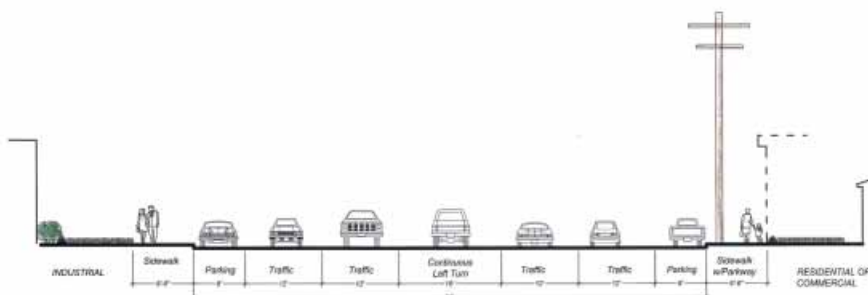
### Proposed Improvements

**Pedestrian Amenities.** Bus shelters and/or seating and pedestrian street lights should be located at **bus stops**. The recommended pedestrian light fixture is the Selux Quadro I with Type V silver louver shielding on 12-foot poles in dark burgundy (RAL 6009). The same color should be used for other street furnishings.

**Gateway Improvements.** Streetscape improvements should be provided to enhance the northern gateway to the city along Cherry Avenue from 70<sup>th</sup> Street to Artesia Boulevard. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. The Southern California Edison right-of-way located just south of 70<sup>th</sup> Street should receive compatible landscaping along its frontage to a depth of 15 to 20 feet.

**Street Trees.** Chinese Flame trees (*Koelreuteria bipinnata*) are recommended to be planted as street trees at a consistent spacing along the entire length of Cherry Avenue in North Long Beach.

At bus stops and in neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians



Existing typical street cross section.

## VI. Streetscape Improvements by Street

### VI-13





should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** The existing medians north of Market Street should be landscaped. New medians should be installed wherever they can be accommodated. The plans in Appendix S show potential locations of medians. Chinese Flame trees should be planted in the medians. They are ideal for this location because their broad canopies can provide shade and scale to Cherry Street. The Chinese Flame trees will share the existing medians with the existing Mexican Fan Palms (*Washingtonia robusta*).

**Complementary Private Improvements.** The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



Proposed improvements - see Section IV for legend.

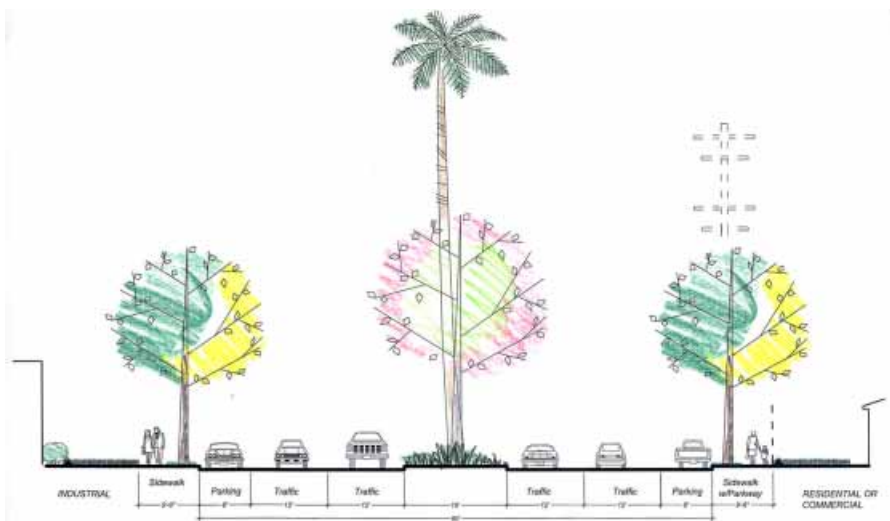


Street trees: Chinese Flame Trees in parkways and medians.



Existing Cherry St. (top), with trees and median ( sketch in middle and photo-composite bottom).





Proposed cross section with medians and street trees.



Street light: Selux Quadro I (color: dark burgundy).



Cherry St. south of the 91 Fwy. (left) and with medians and street trees added (right).



Existing Cherry St. median (left) and with landscaping added (right).

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                             |                    |
|-----------------------------|--------------------|
| Gateway landscaping (north) | \$536,710          |
| Bus stop improvements       | \$250,000          |
| Other street trees          | \$552,451          |
| Other landscaped medians    | \$747,470          |
| <b>Total</b>                | <b>\$2,086,632</b> |

**VI. Streetscape Improvements by Street**

VI-15



## E. South Street

### Background

**Existing Conditions.** South Street begins at Dairy Avenue on the west, widens to a major arterial at Cherry Avenue, and continues east to the Orange County line, where it becomes Orangethorpe Avenue. The total length of South Street in the North Long Beach area, from Dairy Avenue on the west to the eastern city limit (Hayter Avenue), is approximately 2.6 miles.

Existing land uses along South Street in North Long Beach are predominantly community shopping centers and industrial uses east of Cherry Avenue. Land uses west of Cherry Avenue are a mix of single-family and multi-family residential housing and small storefront commercial uses on shallow lots.

The right-of-way is typically 80 feet west of Cherry Avenue and 100 feet to the east. The typical cross section west of Cherry Avenue includes a 60-foot pavement width with 10-foot wide sidewalks. There are 2 traffic lanes and a park-

ing lane in each direction (no median). East of Cherry Avenue the cross section includes an 80-foot pavement width with 10-foot sidewalks. There are 2 traffic lanes and a parking lane in each direction, with a continuous left-turn lane. The typical sidewalk cross section adjacent to residential, industrial and large-parcel commercial areas consists of a 4- to 6-foot-wide parkway along the curb and a 4- to 6-foot wide walkway or a 10-foot-wide walkway with 4' square tree wells. In retail areas, the typical sidewalk cross section consists of a 10-foot-wide walkway with 4-foot square tree wells.

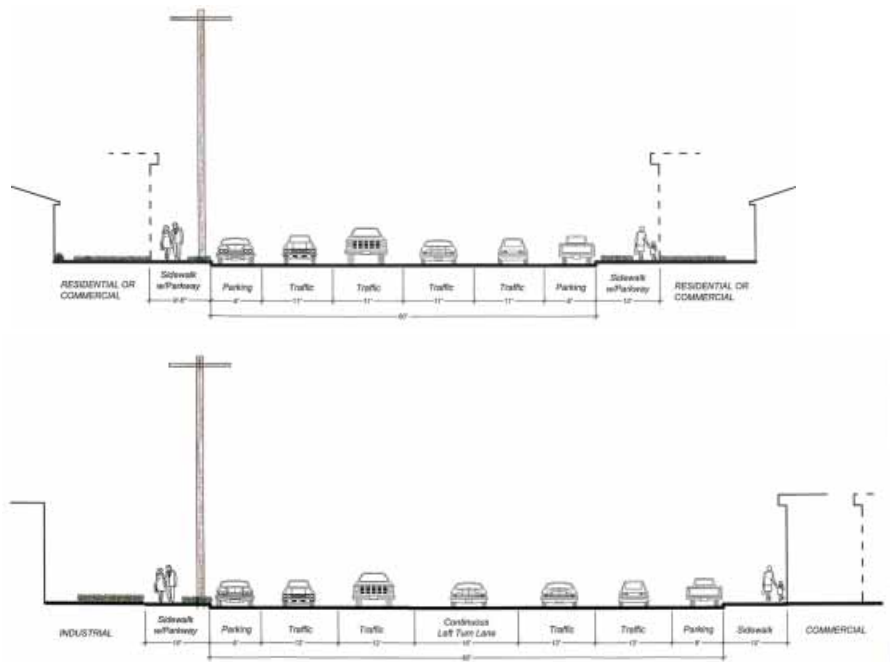
There are scattered street trees on South Street. Roadway lighting is attached to utility poles or on concrete poles on the north side of the street and on concrete poles on the south side. The utility poles on the north side of the street are approximately 40 feet high with 1 or 2 rows of power lines.

Transit service on South Street in North Long Beach is provided by the Line 192 bus, which runs from the Del Amo Blue

Line Station east on Del Amo Boulevard, turns north on Long Beach Boulevard, east on Market Street, north on Atlantic Avenue, and east on South Street to the Los Cerritos Mall. The Line 192 bus stops every half-hour from approximately 5:30 am until 7:30 pm.



Existing land uses - see Section IV for legend.



Typical existing cross sections: west of Cherry Ave. (top); east of Cherry Ave. (bottom).

**Bicycle Master Plan.** There are no existing bicycle facilities on South Street in North Long Beach. The Bicycle Master Plan recommends that a bikeway (class unspecified) be installed on South Street in the long-term future (16 to 20 years).

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most of the commercial land uses west of Cherry Avenue to residential use. Commercial uses will remain at Atlantic Avenue at the Village Center. Existing commercial and industrial land use designations will remain east of Cherry Avenue.

## Proposed Improvements

**Pedestrian amenities and traffic calming.** Corner curb extensions are recommended at the intersections of South Street with Atlantic, Lime, Linden, Walnut and Rose Avenues, in conjunction with either decorative or zebra striped crosswalks. Pedestrian street lights are recommended at the North Village Center and between Orange and Cherry Avenues to provide lighting for the school and at the community-serving commercial nodes. Bus shelters and/or seating and pedestrian street lights should be located at bus stops. The recommended pedestrian light fixture is the Selux Saturn I with Type V silver louver shielding on 12-foot poles in dark green (RAL 6009). The same color should be used for other street furnishings.

**Gateway Improvements.** Streetscape improvements should be provided to enhance the eastern gateway to the city along South Street from Downey Avenue to Obispo Avenue. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign.

**Street trees.** London Plane (*Platanus acerifolia* 'Columbia') trees are recommended to be planted as street trees at a consistent spacing along the entire length of South Street in North Long Beach.

At bus stops and in village centers and neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with

medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** If acceptable to residents along the street, medians should be added east of Cherry Street wherever they can be accommodated. Potential locations are shown in Appendix S. London Plane trees are recommended as the predominant median trees.

**Related Public Improvements.** Pocket parks are suggested 1) in the vicinity of Atlantic Avenue to reinforce the community-serving nature of the neighborhood-serving commercial node at that corner and 2) in the vicinity of Walnut Street to enhance the elementary school.

**Complementary Private Improvements.** The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

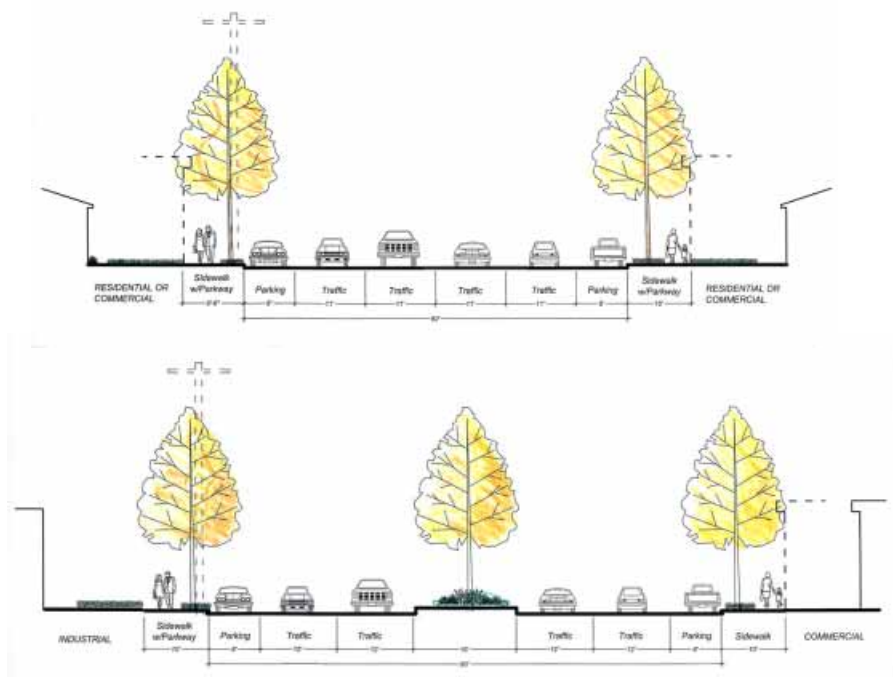
All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



Proposed improvements - see Section IV for legend.







Proposed cross section: west of Cherry Ave. (top) and east (bottom).



Existing South St. west of Cherry Ave. (top), with street trees in spring and summer (middle) and fall (bottom).



Street trees: London Planes in parkways and medians.



Street light: Selux Saturn I (color: dark green).

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                                    |                    |
|------------------------------------|--------------------|
| Gateway landscaping (east)         | \$357,674          |
| Street trees                       |                    |
| Dairy Av. to Atlantic Av.          | \$93,438           |
| Atlantic Av. to eastern city limit | \$621,708          |
| Bus stop improvements              | \$200,000          |
| Other landscaped medians           | \$996,995          |
| <b>Total</b>                       | <b>\$2,269,816</b> |



## F. Market Street

### Background

**Existing Conditions.** Market Street is a locally serving secondary arterial that extends from Dairy Avenue on the west to Woodruff Avenue in Lakewood on the east (becoming Candlewood Street in Lakewood). The total length of Market Street in the North Long Beach area, from Long Beach Boulevard on the west to just east of Cherry Street, is approximately 1.9 miles.

Existing land uses along Market Street are predominantly single-family residential with scattered multi-family housing and storefront commercial uses on shallow lots.

The right-of-way is typically 60 feet wide west of Atlantic Avenue and 74 feet wide to the east. The typical cross section west of Atlantic Avenue includes a 50-foot pavement width with 5-foot wide sidewalks. There is a traffic lane and a parking lane in each direction, with a continuous left-turn lane in the center. The typical sidewalk is a 5-foot-wide walkway with no room for street trees. East of Atlantic Avenue there are 2 traffic lanes and a parking lane in each direction, with a continuous left-turn lane in the center.

There are no street trees on Market Street. Roadway lighting is on metal poles. Utility lines are underground between Long Beach Boulevard and Atlantic Avenue. East of Atlantic Avenue, the utility lines on the south side of the street are above ground on 40- to 50-foot poles with 4 or 5 rows of power lines.

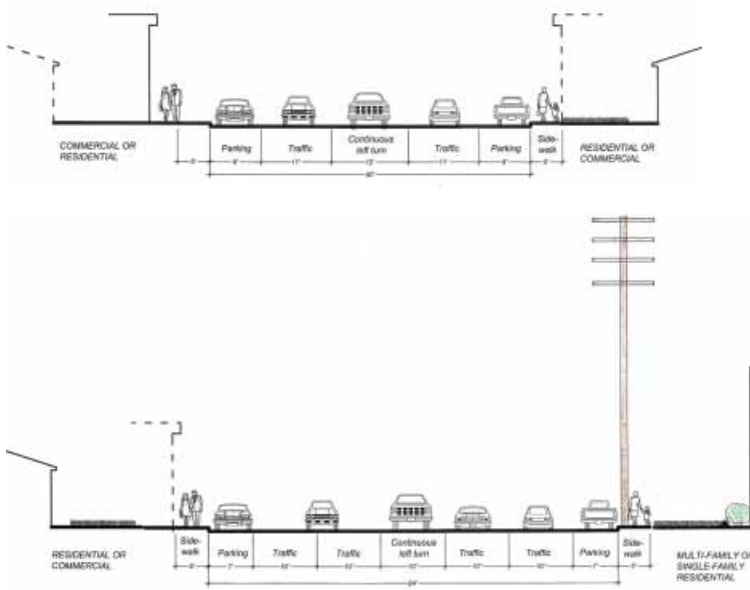
The only transit service on Market Street is the Line 192 bus, which runs between Long Beach Boulevard and Atlantic Avenue as it heads up from Del Amo Boulevard to South Street.

**Bicycle Master Plan.** There are no existing bicycle facilities on Market Street. The Bicycle Master Plan recommends that a bikeway (class unspecified) be installed on Market Street in the long-term future (16 to 20 years).

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of most of the commercial land uses west of Orange Avenue to residential use, consistent with surrounding neighborhoods. Neighborhood commercial nodes will remain at Long Beach Boulevard and Atlantic Avenue, with a sub-regional commercial center at Cherry Avenue.



Existing land uses - see Section IV for legend.



Typical existing street cross sections: west of Orange Ave. (top) and east (bottom).

## VI. Streetscape Improvements by Street

### VI-19



## Proposed Improvements

**Pedestrian amenities and traffic calming.** Corner curb extensions are recommended at the intersections of Market Street with Atlantic, Lime and Linden Avenues and with Olive and Lewis Avenues at Lindbergh Middle School, in conjunction with either decorative or zebra striped crosswalks. Pedestrian street lights are recommended at neighborhood commercial nodes and adjacent to mixed use or multi-family residential development. Bus shelters and/or seating and pedestrian street lights should be located at bus stops. The recommended pedestrian light fixture is the Selux Saturn I with Type V silver louver shielding on 12-foot poles in dark green (RAL 6009). The same color should be used for other street furnishings.

**Street trees.** There is no room for street trees on Market Street. However, a tree planting program to place a tree in each front yard along Market Street should be undertaken. The recommended front yard tree is the Crape Myrtle (*Lagerstromia indica x fauriei* 'Muskogee').

**Medians.** If acceptable to residents along the street, medians could be added east of Orange Avenue. Potential locations are shown in Appendix S. Ginkgos (*Ginkgo biloba* male only) is recommended as the predominant median trees.

**Related Public Improvements.** A pocket park should be provided in the vicinity of Long Beach Boulevard to reinforce the community-serving nature of the neighborhood-serving commercial node at the corner and in the area between Atlantic Avenue and Orange Avenue to enhance the middle school.

**Complementary Private Improvements.** The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

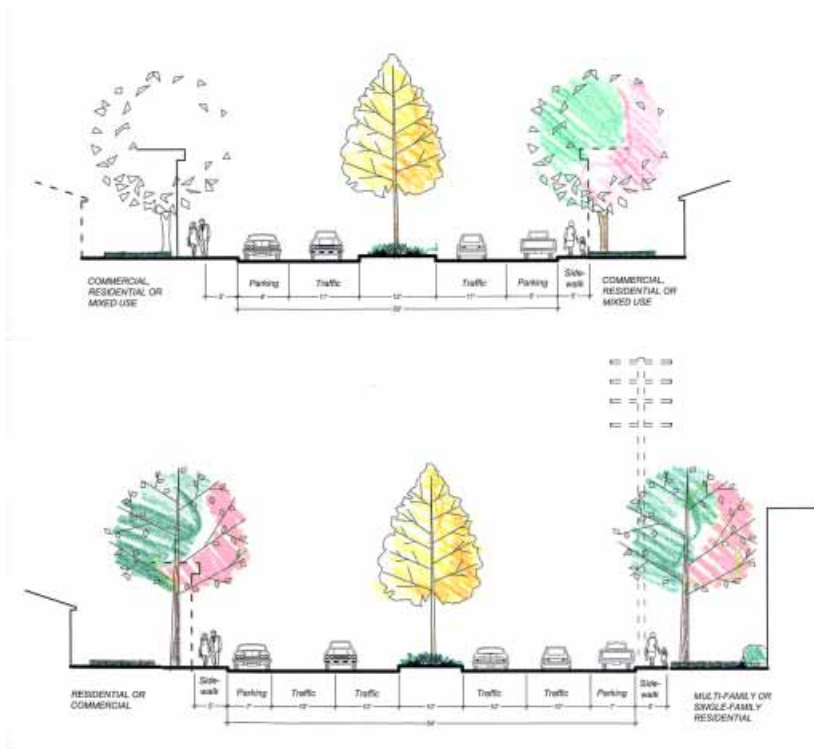
All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



Proposed improvements - see Section IV for legend.



Existing street east of Orange Ave (left) and with improvements (right) .



Vacant lot at Market and Dairy (top) and with pocket park (bottom).

Proposed cross sections with medians and street trees: west of Orange Ave. (top) and east (bottom).



Street trees: Crape Myrtles (left) in parkways and Ginkgos (right) in medians.



Pocket parks can serve a variety of functions for neighborhood residents and can incorporate public art..



Street light:  
Selux Saturn I  
(color: dark green).

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                             |                    |
|-----------------------------|--------------------|
| Street trees in front yards | \$257,861          |
| Landscaped medians          | \$1,144,915        |
| <b>Total</b>                | <b>\$1,402,776</b> |





## G. Orange Avenue

### Background

**Existing Conditions.** Orange Avenue is a minor arterial with one traffic lane in each direction. It carries a relatively high volume of traffic because it provides a continuous route through North Long Beach and Signal Hill to Alamitos Avenue, which, in turn, connects to Downtown Long Beach. The total length of Orange Avenue in the North Long Beach area, from 70<sup>th</sup> Street on the north to Del Amo Boulevard on the south, is approximately 2.6 miles.

Existing land use along Orange Avenue is predominantly single-family housing with scattered multi-family housing and commercial uses, primarily between Harding Avenue and Market Street. There are several churches and other institutional uses along Orange Avenue.

The right-of-way is typically 80 feet. The cross section typically consists of a 62-foot pavement width with 8-foot-wide sidewalks. There is a traffic lane, bicycle lane and parking lane in each direction, with either a painted median or a continuous left-turn lane along the entire length of the street. The typical sidewalk cross section consists of a 4-foot-wide walkway and a 4-foot-wide parkway along the curb.

Mature Jacarandas are planted in parkways along approximately half of the street, sometimes on both sides, but more often on only one side. Roadway light poles are concrete. Utility lines are on poles on the east side of the street. The poles carry 5 rows of power lines, two at about 40 to 45 feet and three at about 55 to 60 feet. Where Jacarandas are located on the east side of the street under the power lines, they do not interfere with the power lines.

Transit service on Orange Avenue in North Long Beach is provided by the Line 7 bus, which runs from Rosecrans Avenue to the Downtown Transit Mall. There are connections to east-west bus routes at Del Amo Boulevard and South Street. On weekdays the Line 7 bus stops every 20 minutes from about 5:30 am until approximately 8:00 pm.

**Bicycle Master Plan.** There is an existing Class II bicycle facility (5-foot-wide bicycle lanes) on Orange Avenue. It provides the primary north-south bicycle route through North Long Beach.

**Strategic Guide Proposals.** The Strategic Guide calls for the conversion of the scattered commercial land uses to residential uses, except for the two small neighborhood commercial nodes at Artesia Boulevard and at Harding Street.



Existing land uses - see Section IV for legend.

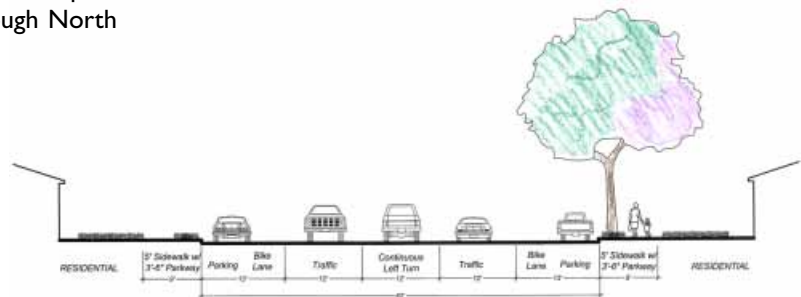
### Proposed Improvements

**Street trees.** Jacarandas (*Jacaranda mimosifolia*) should be planted to provide a consistent tree canopy along Orange Avenue.

At bus stops and in neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (mini-

imum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Pedestrian amenities and traffic calming.** Corner curb extensions are recommended at the intersections of Orange Avenue with Harding, South and Market Streets. Pedestrian street lights will be provided at the two neighborhood commercial nodes. Bus shelters and/or seating and pedestrian street lights should be located at bus stops. The recommended pedestrian light fixture is the Selux Saturn I with



Existing typical street cross section.



Type V silver louver shielding on 12-foot poles in dark green (RAL 6009). The same color should be used for other street furnishings.

**Complementary Private Improvements.** Front yard setbacks are currently landscaped in a traditional manner for single family homes with lawns, shrubs and picket fences. This character should be maintained.

**Parking lots** should be set back behind buildings along Orange Avenue. However, where an existing institutional or commercial use has a parking lot that fronts on Orange Avenue, the Zoning Code requires landscaping of the parking lot setbacks and interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

Parking lot landscaping should be watered by an automatic irrigation system. Within parking lots, it is recommended that trees be planted to provide 50% canopy coverage of the parking lot surface at noon in the summer within 10 years. Planting between parking aisles of one 24-inch box tree of a species that has a mature height and spread of at least 30 feet at every third parking stall in a continuous planting area or in a tree well with at least 36 square feet of surface area, as illustrated in Section IV, will typically achieve the recommended coverage.



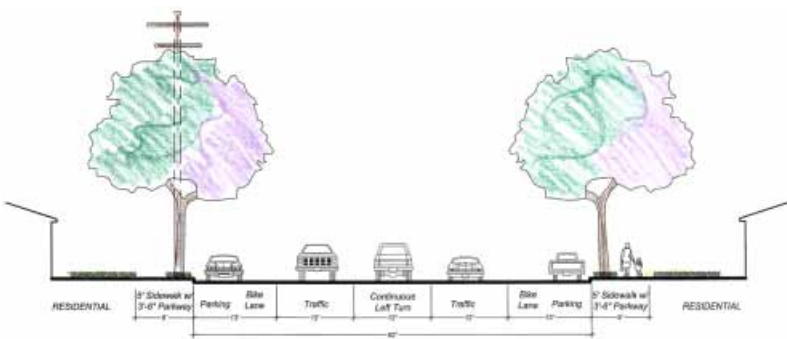
Existing street tree: Jacaranda..



Proposed improvements - see Section IV for legend.



Street light: Selux Saturn I (color: dark green).



Proposed cross section.



Looking south on Orange Street today (top) and with in-fill street trees (bottom).

|  |                  |
|--|------------------|
| <b>Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:</b> |                  |
| Bus stop improvements  | \$250,000        |
| Street trees - in-fill where they are missing  | \$339,893        |
| <b>Total</b>   | <b>\$539,893</b> |



## H. Del Amo Boulevard

### Background

**Existing Conditions.** Del Amo Boulevard is the southernmost major east-west arterial in North Long Beach. As a major arterial, Del Amo Boulevard extends from Avalon Boulevard in Carson to the Orange County line, where it continues east as La Palma Avenue. The total length of the boulevard in the North Long Beach area, from the Long Beach Freeway on the west to the City boundary with Lakewood at Cherry Avenue on the east, is approximately 2.2 miles.

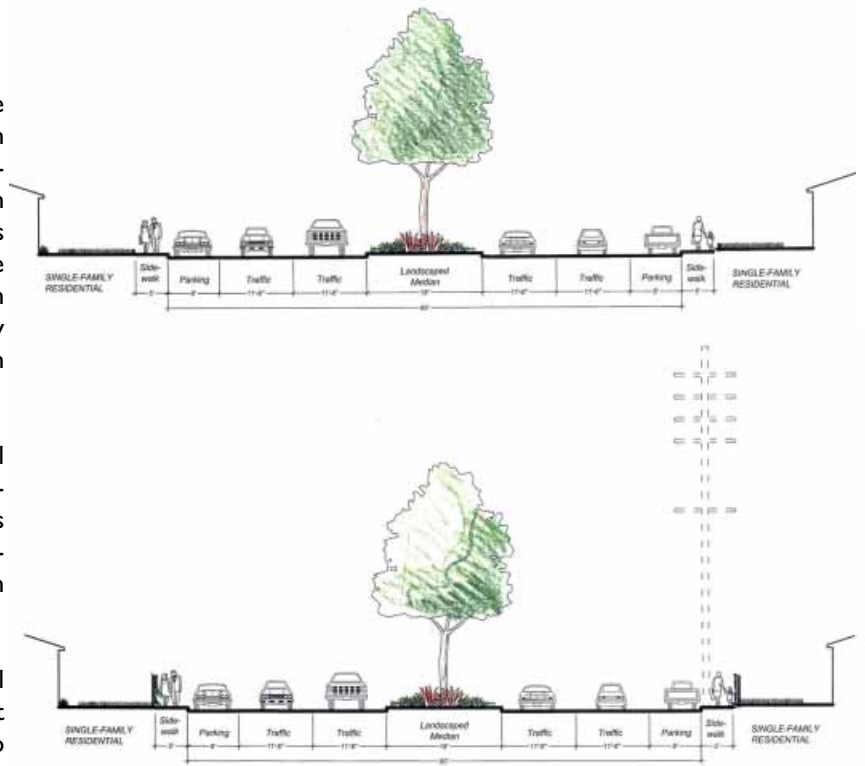
The predominant existing land use along Del Amo Boulevard in North Long Beach is single-family housing. East of Atlantic Avenue, rear yards face the boulevard, typically with block walls paralleling the sidewalks, set a few feet back from the rear property line.

The right-of-way is typically 90 feet. The typical **cross section** includes an 80-foot pavement width with 5-foot-wide sidewalk. There are two traffic lanes and a parking lane in each direction with a raised median or left-turn lanes. The sidewalk has no room for street trees.

Transit service on Del Amo Boulevard in North Long Beach is provided by the Line 191 bus which runs from the Del Amo Blue Line Station to Bloomfield Boulevard in Lakewood and Cerritos. The Line 192 bus also provides service along Del Amo Boulevard from the Blue Line Station on the west to Long Beach Boulevard on the east.

**Bicycle Master Plan.** There are no existing bicycle facilities on Del Amo Boulevard in North Long Beach. The Bicycle Master Plan recommends a Class II facility (5-foot-wide bicycle lanes) from the eastern City limit to Atlantic Avenue and a Class III facility (a signed bicycle route without striping) from Atlantic Avenue to the western City limit in the next 5 years. The proposed configuration shows the existing raised median as 11 feet wide; however, it is actually 18 feet wide.

**Strategic Guide Proposals.** The Strategic Guide calls for no changes in land use and supports the development of the commercial parcels at the intersection of Long Beach Boulevard as a sub-regional node.



Typical existing cross sections: back-up lots (top); front yards on Del Amo (bottom).



Typical existing street conditions: back-up lots (top); front yards on Del Amo (bottom).



Existing land uses - see Section IV for legend.



## Proposed Improvements

**Pedestrian amenities.** The recommended pedestrian light fixture is the Selux Quadro I with Type V silver louver shielding on 12-foot poles in dark bronze (RAL 6014). The same color should be used for other street furnishings.

**Gateway Improvements.** Streetscape improvements should be provided to enhance the western and eastern gateways to the city along Del Amo Boulevard from the Los Angeles River to Long Beach Boulevard and from Cherry Avenue to Orange Avenue. Existing medians should be refurbished and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. Street trees should be added from the LA River to Daisy Avenue.

**Street trees.** The sidewalks along Del Amo Boulevard are generally too narrow to accommodate street trees.

**Medians.** Existing medians should be renovated by removing the pavement and landscaping the entire surface of the median islands. The existing trees are recommended to remain as the predominant median trees.

**Related Public Improvements.** River access should be provided from Del Amo Boulevard if feasible.

**Complementary Private Improvements.** Where front yards face the boulevard, the existing traditional single-family yard landscaping should remain. Where rear yards face the boulevard, consistent walls and planting should be provided as described in Section IV.

The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.



Proposed improvements - see Section IV for legend.



Street light: Selux Quadro I (color: bronze).



Existing west gateway (River and 710 Fwy. crossing) (left) and with gateway landscape enhancements (right).



**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                                     |                  |
|-------------------------------------|------------------|
| Gateway landscaping (east and west) | \$307,522        |
| Bus stop improvements               | \$100,000        |
| Refurbish other medians             | \$430,311        |
| <b>Total</b>                        | <b>\$837,833</b> |



## I. Paramount Boulevard

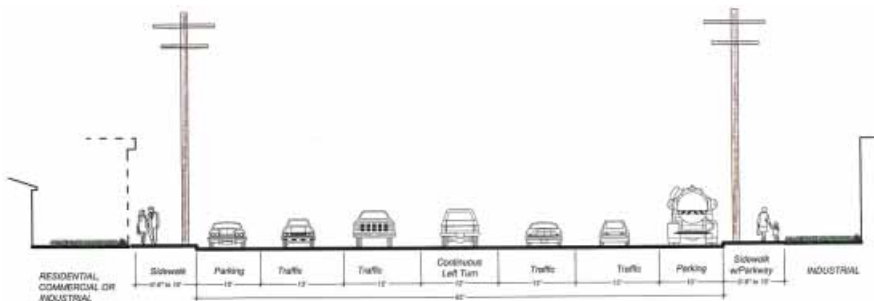
### Background

**Existing Conditions.** Paramount Boulevard is a major north-south arterial, extending from Carson Avenue and the Long Beach Airport on the south through the cities of Lakewood, Long Beach, Paramount and Downey, north to Beverly Boulevard in the city of Pico Rivera in the San Gabriel Valley. The total length of Paramount Boulevard in the North Long Beach area, from 70<sup>th</sup> Street on the north to the Long Beach City boundary on the south, is approximately 1.9 miles.

Existing land uses on the west side of the street are predominantly industrial north of South Street and multi-family residential between South Street and Candlewood Street. Land uses on the east side are industrial between 63<sup>rd</sup> Street and South Street and predominately single-family residential to north to 63<sup>rd</sup> Street, with scattered commercial uses and multi-family housing.



Existing land uses -  
see Section IV for legend.



Typical existing street cross section.

The right-of-way is typically 102 feet. The typical cross section is an 82-foot pavement width with 10-foot-wide sidewalks. There are 2 traffic lanes and a parking lane in each direction with either a painted median or continuous left-turn lane along the entire length of the street. The typical sidewalk cross section consists of a 5- to 6-foot-wide parkway along the curb and a 4- to 5-foot-wide walkway.

There are no street trees along Paramount Boulevard. Roadway lights on concrete poles are consistently spaced. There are above-grade utility lines on both sides of the street: on the west side of the street there are typically 3 rows of power lines between 30 and 40 feet tall, with additional lines to 60 feet tall in some locations; on the east side there are typically 1 to 3 rows of power lines between 30 and 40 feet tall.

There is no transit service on the segment of Paramount Boulevard that runs through North Long Beach. However, the Line 22 bus jogs west from Downey Avenue to Paramount Boulevard at Candlewood (Market Street) and then south on Paramount Boulevard to Carson Street, turning west to Cherry Street, where it alternates with the Line 21 and Line 23 buses to the Downtown Transit Mall.

**Bicycle Master Plan.** There are no existing bikeways on Paramount Boulevard in North Long Beach, and none are proposed by the Bicycle Master Plan.

**Strategic Guide Proposals.** The Strategic Guide recommends no changes in land use along Paramount Boulevard. However, it does recommend the conversion of existing industrial uses along Paramount Boulevard to cleaner, more modern industrial uses.



## Proposed Improvements

**Gateway Improvements.** Streetscape improvements should be provided to enhance the northern and southern gateways to the city along Paramount Boulevard from 70<sup>th</sup> Street to Artesia Boulevard on the north and from Market Street to 56<sup>th</sup> Street on the south. Landscaped parkways and medians should be provided and should be enhanced with gateway identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. The Southern California Edison right-of-way located just south of 70<sup>th</sup> Street will receive compatible landscaping along its frontage to a depth of 15 to 20 feet.

**Street trees.** Brisbane Box trees (*Tristania conferta*) is recommend to be planted as street trees at a consistent spacing along the entire length of Paramount Boulevard in North Long Beach.

At bus stops and in neighborhood nodes, where high volumes of pedestrian activity are anticipated, trees should be planted in large tree wells (6-foot square with grates or 4 feet x 8 feet with stabilized decomposed granite or mulch). In all other locations, trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should

be watered once a week by water truck (minimum 20 gallons per tree per week): for 3 years if in parkways and for 5 years if in tree wells.

**Medians.** The existing median north of Market Street should be landscaped, and new medians should be installed wherever they can be accommodated. The plans in Appendix S show the approximate location of medians. Alternating groups of Canary Island Pines (*Pinus canariensis*) and Crape Myrtle trees (*Lagerstromia indica* x *fauriei* 'Muskogee') are recommended as the median street tree.

**Complementary Private Improvements.** Since the majority of properties fronting on Paramount Boulevard will be residential (west side) or industrial (east side), they will have front yard setbacks between the sidewalk and buildings or parking lots. The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.

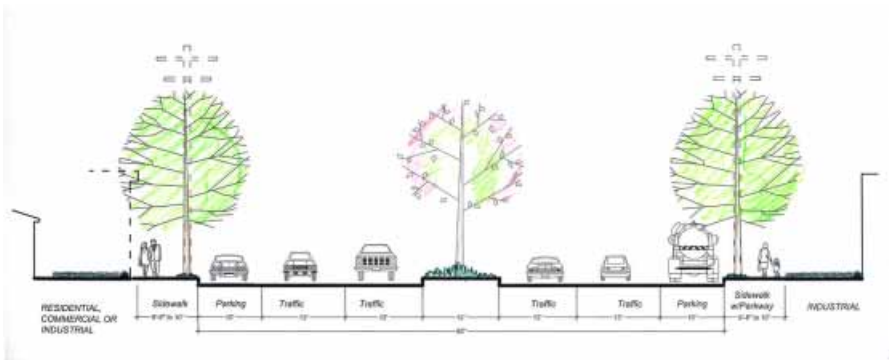


Proposed improvements - see Section IV for legend.



Existing Paramount Blvd. (top) and with street trees in parkways and medians (bottom).





Proposed typical cross section with street trees in parkways and medians.



Existing Paramount Boulevard north of the 91 Freeway (top) and with gateway improvements: landscaped median, street trees in parkways and a landscaped setback on the SCE ROW (bottom).



Street trees: Brisbane Box (top) in parkways and Pines with Crape Myrtle accents (bottom) in medians.

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                                       |                    |
|---------------------------------------|--------------------|
| Gateway landscaping (north and south) | \$549,079          |
| Other street trees                    | \$405,551          |
| Other landscaped medians              | \$1,342,253        |
| <b>Total</b>                          | <b>\$2,296,883</b> |

## J. Downey Avenue

### Background

**Existing Conditions.** Downey Avenue extends through North Long Beach as a north-south arterial from Del Amo Boulevard on the south to the City boundary with Paramount on the north. It continues north to the City of Pico Rivera. The total length of Downey Avenue in the North Long Beach area, from 70<sup>th</sup> Street on the north to South Street on the south, is approximately 1.5 miles.

Existing land uses along Downey Avenue are predominantly single-family residential.

The right-of-way is typically 90 feet north of the Artesia Freeway and 80 to 84 feet south of the freeway. The typical cross section north of the Artesia Freeway is a 70-foot pavement width with 10-foot-wide sidewalks. There are 2 traffic lanes and a parking lane in each direction, with a continuous left-turn lane or painted median. South of the freeway there are two conditions:

1. Between Poppy and Andy Streets there are frontage roads on both sides of the street. In this segment, the pavement is 60 feet wide with 12-foot-wide landscaped medians on either side. There are 2 traffic lanes and no parking lane in each direction and a continuous left-turn lane.
2. Elsewhere south of the freeway the pavement is 60 feet wide with 10-foot wide sidewalks. There are two traffic lanes and a parking lane in each direction (no median or continuous left-turn lane). The typical sidewalk cross section consists of a 6-foot wide parkway along the curb and a 4-foot wide walkway.



Existing land uses - see Section IV for legend.



Existing Tipu trees between Poppy and Andy Streets.

Tipu (Tipuana tipu) trees are planted as street trees on the frontage road medians between Poppy and Andy Streets. They provide a beautiful continuous broad canopy along the medians, but are not recommended for other segments of the street since they require a large root area and tend to uplift pavement. Except between Poppy and Andy Streets, roadway lighting is attached to the utilities poles which are located on both sides of the tree with lines at about 35 feet. Between Poppy and Andy Streets the utility lines are underground and the roadway lights are located on the sidewalks between the frontage road and the houses.

Transit service along Downey Avenue in North Long Beach is provided by the 22 bus which run from Alondra Boulevard on the north to Candlewood (Market) Street, where it turns west toward Paramount Boulevard.

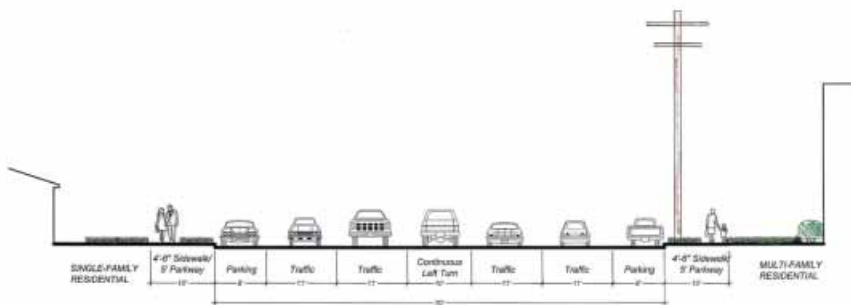
**Bicycle Master Plan.** There are no existing bikeways on Downey Avenue in North Long Beach, and none are proposed by the Bicycle Master Plan.

**Strategic Guide Proposals.** The Strategic Guide recommends no changes in land use along Downey Avenue.

### Proposed Improvements

**Pedestrian amenities.** Bus shelters and/or seating and pedestrian street lights should be located at **bus stops**. The recommended pedestrian light fixture is the Selux Saturn I with Type V silver louver shielding on 12-foot poles in dark green (RAL 6009). This color should be used for other street furnishings.

**Gateway Improvements.** Streetscape improvements should be provided to enhance the northern gateway to the city along Downey Avenue from 70<sup>th</sup> Street to Artesia Boulevard. Landscaped parkways and medians should be provided and should be enhanced with gateway



Typical existing cross section south of the 91 Fwy north of Poppy St. and south of Andy St..







Proposed improvements - see Section IV for legend.

be extended to the parkways with 2 bubblers per tree. In-ground irrigation systems should also be installed in any other locations where such installation is feasible. In other locations, trees should be watered once a week by water truck (minimum 20 gallons per tree per week) for 3 years.

**Medians.** Medians may be provided north of the Artesia Freeway where the width of the street can accommodate them. The plans in Appendix S show the approximate location of medians.

**Complementary Private Improvements.** Front yard setbacks are currently landscaped in a traditional manner for single family homes with lawns, shrubs and picket fences. This character should be maintained.

The Zoning Code requires landscaping of all required building and parking lot setbacks and of parking lot interiors. It is recommended that variances from those landscape requirements be granted only in cases of extreme hardship and that the required trees in those setbacks be aligned with and be of the same variety and form as the street trees to provide a parallel double row of trees where possible.

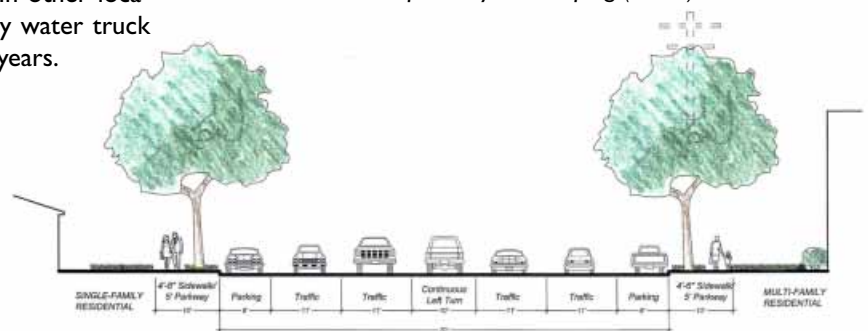
All landscaped areas should include landscaping of the ground plane consisting primarily of plant materials and secondarily

identity elements including Mexican Date Palms or Canary Island Palms, dramatic lighting, and a monument gateway sign. The Southern California Edison right-of-way located just south of 70<sup>th</sup> Street will receive compatible landscaping along its frontage to a depth of 15 to 20 feet.

**Street trees.** Brisbane Box trees (*Tristania conferta*) are recommended to be planted as street trees at a consistent spacing along the entire length of Downey Avenue in North Long Beach. Street trees should be planted in continuous parkways adjacent to 4- or 5-foot wide walkways. Where street trees are in parkways and parallel with medians, the irrigation system installed in the medians should



Existing Southern California Edison right-of-way (above) and with setback and parkway landscaping (below).



Proposed cross section north of Poppy St and south of Andy St.

of hardscape materials, such as rocks. All landscaping should be designed to achieve 100% coverage within 3 years of planting and include an automatic irrigation system.

**Estimated Cost (in 2002\$), including contingency, design and inspection, of First-Priority Streetscape Improvements:**

|                             |                  |
|-----------------------------|------------------|
| Gateway landscaping (north) | \$378,977        |
| Bus stop improvements       | \$150,000        |
| Other street trees          | \$277,635        |
| <b>Total</b>                | <b>\$806,612</b> |